

Chapter II. The 2002–12 National Employment Matrix Structure

The Bureau of Labor Statistics (BLS) has developed occupational projections biennially as part of its Occupational Outlook program for more than five decades. Although the data sources and projection techniques have changed, and computers now perform calculations previously done manually, the basic procedures remain the same. BLS occupational projections use three employment matrices as a tool for analyzing occupation utilization within industries and for projecting occupational employment. Because the matrices share the same configuration, an early step in each projection cycle is defining their occupation and industry employment structure. Occupations define matrix rows, while class of worker categories—self-employed; unpaid family; and wage and salary workers, by industry—define matrix columns. Once defined, the three matrices use the same structure.

A major goal in defining the matrix structure is to provide the broadest possible measures of employment. The availability of data for constructing the base-year matrix—the 2002 national employment matrix—generally is the limiting factor. Data on employment of the self-employed, unpaid family workers, and wage and salary workers, by industry, come from a variety of sources and fill the cells of the base-year matrix. Employment measures jobs, not individuals, because individuals may be employed by more than one employer.

2002 base-year employment matrix

Calculating employment for each cell in the base-year matrix—currently the year 2002—establishes the initial employment levels for occupational projections.

Self-employed and unpaid family worker employment come from the Current Population Survey (CPS). Information on second jobs also is collected for one-quarter of the sample each month and is combined with primary-job occupational employment estimates to provide a broader employment measure of the self-employed and unpaid family workers. Employment figures for these two categories of workers are available only at the total, all-industries level.

For most industries, Occupational Employment Statistics (OES) survey data identify occupational distributions, and Current Employment Statistics (CES) data provide information on total industry employment.¹ Wage and salary

industry employment estimates, by occupation, are derived by multiplying the proportion of wage and salary occupational employment in the industry, calculated from OES survey data, by base-year total wage and salary industry employment, computed from CES data.

Other sources provide information for industries not covered by the OES survey. The CPS furnishes wage and salary occupation data for agricultural production, forestry, fishing, hunting, and support activities for agriculture and forestry. Federal Government and U.S. Postal Service (USPS) occupational wage and salary employment data come from the U.S. Office of Personnel Management (OPM) and the USPS, respectively.

Total base-year employment for an occupation is the sum of employment in a row across all columns—the combination of self-employed, unpaid family, and wage and salary workers. Occupational employment within industries, divided by total industry employment, yields the occupational distribution ratios used in preparing the projected-year employment matrix.

Change-factor matrix

A second matrix, the change-factor matrix, uses the same structure as the base-year employment matrix to estimate changes in the utilization of wage and salary workers, by occupation, within industries. Systems analysts, for example, would be expected to become a greater proportion of each industry's employment as the number of applications for computer use continues to increase. The change factor multiplied by the base-year wage and salary occupational distribution ratio determines the occupational distribution ratio in the projected year. Occupational change factors are prepared only for wage and salary employment in detailed industries.

2012 Projected-year employment matrix

Preparing the projected-year employment matrix is the last step in the projection process. For a given industry, projected-year industry wage and salary employment, multiplied by the projected-year occupational distribution ratio, yields projected-year wage and salary occupational employment for the industry.² Occupational employment for self-employed and unpaid family workers is projected separately with the use of time-series analytical techniques. Total projected-year occupational employment is the sum

¹ The OES surveys about 400,000 establishments each year, one-third of the sample, to collect occupational wage and salary employment and wage data. Surveying the entire sample takes 3 years. Detailed information about the 2002 OES survey is available at http://www.bls.gov/oes/2002/oes_tec.htm. CES wage and salary employment data come from a monthly sample of about 300,000 establishments. For more information, visit <http://www.bls.gov/ces/home.htm>.

² Industry sector employment projections prepared in the Division of Industry Employment Projections use a comprehensive modeling technique that estimates output as well as employment. More detailed industry employment projections produced using historical time series information are included in the matrix and are consistent with their parent industry sector.

of employment in a row across all columns—the sum of the employment figures for self-employed, unpaid family, and wage and salary workers.

Classification system changes

Since their inception over 30 years ago, national employment matrices have incorporated industry-by-occupation wage and salary employment information from two different data sources. Data from the Census Bureau's Census of Population initially yielded industry-by-occupation employment patterns based on individuals' responses coded to the Census Bureau's industry and occupation classification systems.

The OES survey-based industry-by-occupation employment data adopted for use with the 1980–90 projections constituted the second data source used in preparing the national employment matrix. OES survey data were preferred because the data were collected from establishments that were given occupational definitions for reporting employment and because the OES data were collected more frequently.

The OES survey occupation structure, with some exceptions, classified occupations according to the principles of the newly created 1980 Standard Occupational Classification (SOC) system and generally was consistent with the 1970, the 1980, and even the 1990 Census of Population occupational classification systems. Large differences in employment for identical occupations occurred, however, because the OES survey obtained information from employers whereas the Census of Population relied on the responses of individuals. BLS used the 1980 SOC-based OES structure, with only minor adjustments, through the 1998–2008 occupational projections.

Occupational projections for 2000–10 incorporated the 2000 Standard Occupational Classification system.³ This change prompted major differences in the definitions and the number of occupations for which projections could be developed. The differences in employment between the 2000 SOC-structured OES survey data and earlier 1980 SOC-system-based OES survey occupational data resulted in a break in the historical occupational employment time series. In this case, the differences resulted not from a change in a data source, but from the change in the classification system.

The OES survey's industry classification system—first based on the 1977 Standard Industrial Classification (SIC) system and later adopting the 1987 SIC system—underwent relatively few changes. While the 2000–10 projections incorporated the new 2000 SOC system, the OES survey continued to use the 1987 Standard Industrial Classification system.

³ See "Chapter I. 2000–10 Occupational Projections Incorporate the 2000 Standard Occupational Classification System," *Occupational Projections and Training Data*, Bulletin 2542 (Bureau of Labor Statistics, January 2002).

2002–12 Projections use the 2000 SOC system and the 2002 NAICS

Occupational projections for 2002–12 differ from those in the past in that they incorporate both the 2000 Standard Occupational Classification (SOC) system and the 2002 North American Industry Classification System (NAICS). The 2000 SOC system, first used with the 2000–10 projections, replaced the 1980 SOC system. Converting to the 2000 SOC system for the 2000–10 projections was necessitated by the OES survey's switch to that system. Similarly, 2002 OES survey data that are the first to incorporate the 2000 SOC system and the 2002 NAICS facilitated the use of these classification systems in the 2002–12 employment matrices.

The availability of 2000 Census Bureau occupation- and industry-based CPS data also made the transition easier. Although BLS began collecting 2000 SOC and 2002 NAICS-based CPS data in the January 2003 survey, CPS microdata for all surveys in 2000 through 2002 were recoded by the Census Bureau, which used the 2000 Census of Population occupation and industry classification system. The 2000 Census of Population occupation and industry classification system is almost completely consistent with the 2000 SOC system and the 2002 NAICS.

The 2002 NAICS replaces the 1987 SIC system. The new system is designed so that economic units having similar production processes are classified into the same industry in the United States, Canada, and Mexico. The industry definitions in NAICS frequently are not consistent with those formerly used with the 1987 SIC system.⁴

Incorporating the 2000 SOC system into the 2002 national employment matrix

Improving consistency with the 2000 SOC system and establishing the broadest employment coverage possible were goals desired for the 2002 national employment matrix structure. Both goals were achieved, a task that required identifying and accounting for all valid 2000 SOC occupations and identifying data sources for occupations and industries not covered by the 2002 OES survey. Table II-1 presents the occupation structure for the 2002 employment matrix.

Occupations define the rows in the matrix, and several types of occupations exist in the final structure of the matrix:

- Summary occupations (a total of 255) combine employment information on detailed—"line-item" or "rollup"—occupations and display 2002 and projected 2012 employment estimates.
- Line-item occupations (717) possess the greatest level of published occupation employment detail in the matrix, have a one-to-one relationship with

⁴ Information on matching 1987 SIC industries with those of the 2002 NAICS is available at <http://www.census.gov/epcd/naics02>.

OES survey occupation data, and display 2002 and projected 2012 employment estimates.

- Rollup occupations (8) also possess the greatest level of published occupation employment detail in the matrix, present data from two or more collapsed occupations, and display 2002 and projected 2012 employment estimates.
- Collapsed occupations (59) possess only base-year employment; these occupations are combined to create rollup occupations.

The implementation of the SOC system in the 2002 national employment matrix clearly was an improvement over 2000 matrix efforts, but fell just short of complete success at the most detailed occupational level. Of the 725 detailed occupations—those individual occupations identified as line-item or rollup occupations in table II-1 —696 are consistent with a 2000 SOC occupation. Residual occupations—the “all other...” occupation category used to classify a number of occupations within a specific group—accounted for those not consistent with the SOC system. (The treatment of residual occupations in the OES survey explains much of the inconsistencies and is discussed later in this chapter.)

The 2002 national employment matrix structure, the 10 intermediate SOC aggregation group levels, and the 22 SOC major occupation groups (excluding SOC military occupations, which are not covered in the matrix) are completely consistent with one another. While closely consistent with the 2000 SOC system structure at the detailed occupation level, and completely consistent at the major occupation group level, the matrix structure is different from the 2000 SOC structure, for several reasons.

Non-SOC occupation coverage in the OES survey data.

In an effort to reduce the number of residual occupations listed on the survey forms, in some cases the OES survey combined residual occupations from different broad occupational groups. For example, the OES survey combined the SOC occupations 13-1199, “business operation specialists, all other”; 13-1079, “human resources, training, and labor relations specialists, all other”; and 13-1081, “logisticians,” into the survey occupation 13-1199, “business operation specialists, all other.” Although this survey occupation was thus associated with a valid SOC code, the data collected represented three SOC occupations. To possess a valid SOC occupation code in the 2002 matrix directory, a detailed occupation must represent a single SOC occupation and also must represent employment data for all classes of workers and industries. Because the OES survey occupation 13-1199, “business operation specialists, all other,” consists of three SOC occupations, it is judged not to be a valid SOC occupation for inclusion in the 2002 matrix and is assigned the non-SOC code 13-1198. The title, “all other business operations specialists,” differs from the SOC title and is retained. Detailed occupations in this category are as follows:

<i>Matrix Code</i>	<i>Matrix title</i>	<i>Occupation type</i>
13-1198	<i>All other business operations specialists</i>	<i>Line item</i>
19-3098	<i>All other social scientists and related workers</i>	<i>Line item</i>
19-4098	<i>All other life, physical, and social science technicians</i>	<i>Line item</i>
25-1198	<i>All other postsecondary teachers</i>	<i>Collapse</i>
29-1198	<i>All other health diagnosing and treating practitioners</i>	<i>Line item</i>
33-9095	<i>All other protective service workers</i>	<i>Line item</i>
35-9098	<i>All other food preparation and serving related workers</i>	<i>Line item</i>
41-9098	<i>All other sales and related workers</i>	<i>Line item</i>

In a second example, the OES survey occupation 17-3099, “all other drafters, engineering, and mapping technicians,” is not in the 2000 SOC system. The OES staff created this residual occupation, which includes the data for the SOC occupations 17-3019, “drafters, all other”; and 17-3029, “engineering technicians, except drafters, all other.” Because no OES survey information is provided for either occupation 17-3019 or occupation 17-3029, the non-SOC code and title 17-3099, “all other drafters, engineering, and mapping technicians,” is retained in the 2002 occupational directory. Occupations in this group are as follows:

<i>Matrix Code</i>	<i>Matrix title</i>	<i>Occupation type</i>
17-3099	<i>All other drafters, engineering, and mapping technicians</i>	<i>Line item</i>
21-9099	<i>All other counselors, social, and religious workers</i>	<i>Line item</i>
23-9099	<i>All other legal and related workers</i>	<i>Line item</i>
25-3999	<i>All other teachers, primary, secondary, and adult</i>	<i>Line item</i>
25-9199	<i>All other library, museum, training, and other education workers</i>	<i>Line item</i>
27-1099	<i>All other art and design workers</i>	<i>Line item</i>
29-9199	<i>All other health practitioners and technical workers</i>	<i>Line item</i>
37-9099	<i>All other building and grounds cleaning and maintenance workers</i>	<i>Line item</i>
39-3199	<i>All other gaming service workers</i>	<i>Line item</i>
43-4999	<i>All other financial, information, and record clerks</i>	<i>Line item</i>
43-9999	<i>All other secretaries, administrative assistants, and other office support workers</i>	<i>Line item</i>
45-9099	<i>All other farming, fishing, and forestry workers</i>	<i>Line item</i>
47-4999	<i>All other construction trades and related workers</i>	<i>Line item</i>

A third case involves OES survey occupation 17-1099, “all other architects, surveyors, and cartographers.” This occupation was used in the OES survey to facilitate data collection, is not in the 2000 SOC structure, and does not contain any occupations that are in the 2000 SOC system. The group of occupations with these features includes the following:

<i>Matrix Code</i>	<i>Matrix title</i>	<i>Occupation type</i>
17-1099	<i>All other architects, surveyors, and cartographers</i>	<i>Line item</i>
43-5199	<i>All other material recording, scheduling, dispatching, and distributing workers</i>	<i>Line item</i>
49-2099	<i>All other electrical and electronic equipment mechanics, installers, and repairers</i>	<i>Line item</i>
49-3099	<i>All other vehicle and mobile equipment mechanics, installers, and repairers</i>	<i>Line item</i>
51-3099	<i>All other food processing workers</i>	<i>Line item</i>
51-5099	<i>All other printing workers</i>	<i>Line item</i>
53-2099	<i>All other air transportation workers</i>	<i>Line item</i>
53-5099	<i>All other water transportation workers</i>	<i>Line item</i>

The final example, the matrix rollup occupation 53-4039, “subway, streetcar operators and all other rail transportation workers,” is not an OES survey or an SOC occupation. Matrix staff aggregated OES survey and SOC occupations 53-4041, “subway and streetcar operators”; and 53-4099, “rail transportation workers, all other,” so as not to release questionable data.

Adjusting OES survey data. Not all industries and occupations are surveyed by the OES, so coverage is incomplete. A number of alterations to the 2002 OES survey data were needed to improve the coverage and quality of information in the national matrix. Dealing with the impact of the OES survey’s occupational structure, the recoding of OPM and USPS employment data by OES staff, and the changes necessitated by introducing the 2002 NAICS industries provided significant challenges.

Non-covered OES survey occupations. Before the 2001 survey, the OES survey structure sometimes resulted in the collection of information for “all other...” residual occupations that was inconsistent with the SOC structure.⁵ As a re-

sult, significant components of employment could not be identified for some broad occupations. This limitation of OES employment data was of special concern to staff who use OES survey-based matrix data in preparing the major BLS publication: the *Occupational Outlook Handbook (OOH)*. The problem was especially acute for *Handbook* occupation 29-1060, “physicians and surgeons,” because of the occupation’s prominence, the potential uses of the data, and the availability of other employment data with different estimates that might raise questions about the credibility of BLS estimates. Similar concerns existed for other SOC broad occupations.

Under the 2000 SOC structure, data on physicians and surgeons could be collected for detailed occupations and aggregated to the broad occupation 29-1060, “physicians and surgeons,” as follows:

- 29-1060 Physicians and surgeons*
- 29-1061 Anesthesiologists*
- 29-1062 Family and general practitioners*
- 29-1063 Internists, general*
- 29-1064 Obstetricians and gynecologists*
- 29-1065 Pediatricians, general*
- 29-1066 Psychiatrists*
- 29-1067 Surgeons*
- 29-1069 Physicians and surgeons, all other*

The problem with the OES survey data for occupation 29-1060, “physicians and surgeons,” exists because the employment data for SOC occupation 29-1069, “physicians and surgeons, all other” originally were not collected separately. Rather, the data were collected in the OES residual occupation 29-1199, “all other health diagnosing and treating practitioners,” along with data for two other occupations. The OES survey code 29-1199 is a valid SOC code, but contains employment data for more than one SOC occupation: 29-1129, “therapists, all other”; and 29-1199, “health diagnosing and treating practitioners, all other.” As a result, the code 29-1199 is assigned the non-SOC code 29-1198 in the matrix.

Although employment data for occupation 29-1069, “physicians and surgeons, all other,” have been collected as a separate occupation since the 2000 OES survey, OES procedures continue to place the data into occupation 29-1199, “all other health diagnosing and treating practitioners,” a practice that is expected to continue until 3 years of OES survey data are available. The OES survey’s current output-processing structure precludes estimating employment for detailed SOC occupation 29-1069, “physicians and surgeons, all other,” and thus precludes estimating total employment for the SOC broad occupation group 29-1060, “physicians and surgeons,” which includes occupation 29-1069, “physicians and surgeons, all other.”

To meet the data needs for the *OOH*, an internal OES survey data file with occupational employment estimates for all occupations surveyed in any of the years 1999–2002 was used to circumvent existing data limitations. This file permitted the development of industry-specific employ-

⁵ The OES survey began collecting data for all detailed 2000 SOC occupations in 2001, but estimates for some SOC occupations are not currently available.

ment estimates for occupation 29-1069, “physicians and surgeons, all other,” as well as occupations 11-9039, “education administrators, all other,” and 19-1029, “biological scientists, all other”—two additional detailed occupations needing employment data for the *Handbook*. Employment for these detailed occupations was subtracted from the appropriate residual in each industry. Total employment for each industry was retained.

Non-covered OES survey industries. The OES survey generated 2002 occupational employment estimates by applying 2002 fourth-quarter industry employment data from the Quarterly Census of Employment and Wages (QCEW) program to OES survey occupation patterns in each industry. The QCEW (also known as the ES-202) program represents the employment of workers covered by unemployment insurance programs in the United States and its territories. QCEW employment for NAICS industry 8131, “religious organizations,” however, does not reflect all workers, because unemployment insurance coverage for this industry is incomplete.

In preparing occupation projections, the matrix staff applies industry employment from the Current Employment Statistics (CES) program to most industries, including religious organizations. The CES employment figure for religious organizations is almost 10 times that from the QCEW; consequently, there is concern that some occupations in this industry may not be adequately represented by the OES survey. In particular, occupation 21-2011, “clergy,” the most significant occupation in religious organizations, would be considerably undercounted by using QCEW employment to select the OES sampling frame. Employment for clergy in the 2002 CPS industry-occupation matrix was about 383,000, approximately 87 percent higher than the QCEW-based OES estimate. Accordingly, the occupational distribution for religious organizations was altered by increasing employment estimates for clergy by 179,000 and decreasing those of every other occupation within the industry.

OES staff recoding of OPM and USPS occupational data. The OPM and USPS occupational employment data provided to OES staff use occupational codes and titles unique to their organizations. The OES staff recodes the OPM and USPS occupational data to SOC occupations. A review of the recoded OPM and USPS occupational data by staff preparing the occupational projections revealed deficiencies; for example, all Federal computer specialist employment was categorized into only 4 of the 11 SOC computer specialist occupations. After this review, recommendations for changes in distributing the OPM and USPS occupation data over SOC-based Federal occupational employment became part of the process of determining the matrix. This adjustment to OPM and USPS data initially coded by OES staff significantly modified occupational employment patterns within the Federal Government, increasing the number of information technology occupations from 4 to 11, as follows:

Unadjusted OES-coded Federal Government information technology occupations

15-1011 Computer and information scientist, research
15-1021 Computer programmers
15-1031 Computer software engineers, applications
15-1099 All other computer specialists

Adjusted OES-coded Federal Government information technology occupations

11-3021 Computer and information systems managers
15-1011 Computer and information scientist, research
15-1021 Computer programmers
15-1031 Computer software engineers, applications
15-1032 Computer software engineers, systems software
15-1041 Computer support specialists
15-1051 Computer systems analysts
15-1061 Database administrators
15-1071 Network and computer systems administrators
15-1081 Network systems and data communications analyst

Incorporating the 2002 NAICS into the 2002 national employment matrix

Before starting preparations for the 2002–12 projections, the Office of Occupational Statistics and Employment Projections analyzed alternatives and then decided to incorporate the 2002 NAICS into the 2002–12 projections instead of the 2004–14 projections, as originally planned. The change permitted the 2002–12 projections to share the industry classification system used by other BLS programs and other Federal statistical agencies. Incorporating the 2002 NAICS structure 2 years ahead of schedule required overcoming many challenges and caused a 2-month delay in releasing the projections. Table II-2 presents the industry structure for the 2002 employment matrix.

2002 base-year employment matrix. Several goals shaped the design of the 2002 employment matrix’s industry structure:

1. Four-digit NAICS industry detail would be provided whenever possible.
2. The structure of the matrix had to be consistent with the less detailed industry configuration used by the Division of Industry Employment Projections (DIEP). More detailed matrix industry employment would have to add to DIEP industry employment controls.
3. The structure would be consistent with that used by DIEP and the CES survey program in that private and government employment would be presented separately.

For the most part, these goals were achieved. Data are available at the four-digit level for 261 of the 282 matrix columns presented, and the structure is consistent with that of the DIEP and the CES survey program. (See table IV–1, which presents DIEP industry sector employment projections and more detailed matrix industry projections.)

Class of worker categories—self-employed workers,

unpaid family workers, and wage and salary workers—by industry define the columns of the 2002 employment matrix. Industry employment information is available only on wage and salary workers. As the following tabulation shows, the OES survey contributes occupational distribution information for wage and salary workers in 269 of the 282 matrix columns, by far the largest source of occupational information (in addition, OES survey staff recoded OPM and USPS occupational employment data to the 2000 SOC structure for use in the national employment matrix):

<i>Class-of-worker category</i>	<i>Number of Data columns</i>	<i>source</i>
<i>Total</i>	282	
<i>Self-employed workers, primary job</i>	1	<i>CPS</i>
<i>Self-employed workers, secondary job</i>	1	<i>CPS</i>
<i>Unpaid family workers, primary job</i>	1	<i>CPS</i>
<i>Unpaid family workers, secondary job</i>	1	<i>CPS</i>
<i>Wage and salary worker, primary job, agriculture, forestry, fishing, and private households</i>	6	<i>CPS</i>
<i>Wage and salary worker, secondary job, agriculture, forestry, fishing, and private households</i>	1	<i>CPS</i>
<i>Wage and salary workers, Federal Government</i>	1	<i>OPM</i>
<i>Wage and salary workers, U.S. Postal Service</i>	1	<i>USPS</i>
<i>Wage and salary workers, other industries</i>	269	<i>OES</i>

Note that the class-of-worker structure of the 2002 matrix columns is similar to that used with the 2000–10 projections. The 2002–12 employment matrices provide data for 278 detailed wage and salary industries, compared with 266 detailed wage and salary industries presented in earlier projections.

2002 OES survey data. The OES survey is designed to collect information on all industries from one-third of the sample each year. Thus, 3 years normally would be required to provide data for the complete sample. OES survey data for 2002 would consist of 2000, 2001, and 2002 OES survey data, except that the 2002 data deviate from the norm to accommodate a change in collection procedures.

In November 2002, the OES survey changed from an annual survey of 400,000 establishments to a semiannual survey of 200,000 establishments.⁶ Consequently, data from the November 2002 survey came from a smaller sample. In addition, the November survey initiated the use of a NAICS-based sampling frame. While data were collected on NAICS industries, the data for 1999–2001 were collected under the 1987 SIC industry structure and then recoded to NAICS. In order to maintain adequate geographic, industrial, and occupational coverage through the implementation of NAICS and semiannual sampling, the November 2002 data were combined with the annual samples from

1999, 2000, and 2001, for a total sample size of approximately 1.4 million establishments.

Industries not covered in the OES survey. The 2002 OES survey did not collect data for the following industries:

- 111000 Crop production*
- 112000 Animal production*
- 113100 Timber tract operations*
- 113200 Forest nurseries and gathering of forest products*
- 114000 Fishing, hunting, and trapping*
- 115300 Support activities for forestry*
- 814100 Private households*

CPS information provided an alternative source of data for industries 111000, “crop production”; 112000, “animal production”; 114000, “fishing, hunting, and trapping”; and 814100, “private households and helped fill some other data gaps. CPS data, however, were not always available at the four-digit NAICS level.

NAICS industry 113300, “logging,” was included in the 2002 OES survey. The broader industry, 113000, “forestry and logging,” was separated into non-NAICS industry 113132, “forestry,” and NAICS industry 113300, “logging.” Data for industry 113132 were obtained from the 2002 CPS. CPS data for NAICS industries 113100, “timber tract operations,” and 113200, “forest nurseries and gathering of forest products,” are not available separately.

The OES survey included NAICS industries 115100, “support activities for crop production,” and 115200, “support activities for animal production,” but did not include coverage for industry 115300, “support activities for forestry.” Because of the incomplete coverage in the 2002 OES survey, the CPS data for NAICS 115000, “support activities for agriculture and forestry,” were substituted.

Private and government data for industries 611000, “educational services” (NAICS 611100–611700), and 622000, “hospitals” (NAICS 622100–622300) are not available separately from the OES survey. OES staff, however, provided an internal data file that separated 2002 data on the educational services and hospitals industries according to private, State government, and local government ownership. Occupational data for industries 611000, “educational services,” and 622000, “hospitals,” appear separately for private, State, and local government ownership in the 2002–12 national employment matrices.

Non-NAICS government codes. Because they do not follow the 2002 NAICS structure, all industries within the government sector, except for industry 491100, “Postal Service,” have non-NAICS codes and titles, as follows:

- 919999 Federal Government, excluding Postal Service*
- 926110 State government educational services*
- 926220 State government hospitals*
- 929200 State government, excluding education and hospitals*
- 936110 Local government educational services*
- 936220 Local government hospitals*
- 939300 Local government, excluding education and hospitals*

⁶ Beginning in 2003, the survey will take place in May and November every year.

Distributing CPS employment data for 2002 to SOC occupations. In addition to relying on the major contribution of 2002 OES survey data consistent with the structure of the 2000 SOC system, the national employment matrix depends on 2002 CPS employment data for estimates of the numbers of self-employed, unpaid family, and wage and salary workers in some industries (see earlier). The 2002 CPS was collected under the 1990 Census Bureau industry and occupation classification system, but 2002 survey responses were recoded by Census Bureau staff, using the 2000 Census of Population Occupation and Industry classification system, which closely resembles the 2000 SOC system. A crosswalk was created to distribute CPS employment from one CPS occupation over several matrix occupations on the basis of matrix occupation employment.

Of the 502 CPS occupations that were distributed in the crosswalk, 370 were exact matches. The remaining CPS

occupations were distributed to two or more SOC occupations.

Future changes

Many of the problems encountered in incorporating the 2000 SOC system and the 2002 NAICS into the 2000 national employment matrix resulted from the structure of the OES survey. Planned changes should resolve many of these problems. With the 2001 survey, data began to be collected for all detailed 2000 SOC occupations. Residual “all other...” occupations will not be listed on the survey forms, but respondents will add information to identify occupations not so listed. State analysts will recode employer entries to SOC occupations, including “all other...” occupations. OES data will be collected and processed in accordance with the 2000 SOC structure, using this procedure. BLS plans to make available OES data on all detailed 2000 SOC occupations with the release of the November 2004 OES data.

Table II-1. National employment matrix occupational directory, 2002

Matrix code	Valid SOC code?	Matrix occupation title	Occupation type	Matrix code	Valid SOC code?	Matrix occupation title	Occupation type
00-0000	NO	Total, all occupations	Summary	13-1041	YES	Compliance officers, except agriculture, construction, health and safety, and transportation	Line item
11-1300	NO	Management, business, and financial occupations	Summary	13-1051	YES	Cost estimators	Line item
11-0000	YES	Management occupations	Summary	13-1061	YES	Emergency management specialists	Line item
11-1000	YES	Top executives	Summary	13-1070	YES	Human resources, training, and labor relations specialists	Summary
11-1011	YES	Chief executives	Line item	13-1071	YES	Employment, recruitment, and placement specialists	Line item
11-1021	YES	General and operations managers	Line item	13-1072	YES	Compensation, benefits, and job analysis specialists	Line item
11-1031	YES	Legislators	Line item	13-1073	YES	Training and development specialists	Line item
11-2000	YES	Advertising, marketing, promotions, public relations, and sales managers	Summary	13-1111	YES	Management analysts	Line item
11-2011	YES	Advertising and promotions managers	Line item	13-1121	YES	Meeting and convention planners	Line item
11-2020	YES	Marketing and sales managers	Summary	13-1198	NO	All other business operations specialists	Line item
11-2021	YES	Marketing managers	Line item	13-2000	YES	Financial specialists	Summary
11-2022	YES	Sales managers	Line item	13-2011	YES	Accountants and auditors	Line item
11-2031	YES	Public relations managers	Line item	13-2021	YES	Appraisers and assessors of real estate	Line item
11-3000	YES	Operations specialties managers	Summary	13-2031	YES	Budget analysts	Line item
11-3011	YES	Administrative services managers	Line item	13-2041	YES	Credit analysts	Line item
11-3021	YES	Computer and information systems managers	Line item	13-2050	YES	Financial analysts and advisors	Summary
11-3031	YES	Financial managers	Line item	13-2051	YES	Financial analysts	Line item
11-3040	YES	Human resources managers	Line item	13-2052	YES	Personal financial advisors	Line item
11-3051	YES	Industrial production managers	Line item	13-2053	YES	Insurance underwriters	Line item
11-3061	YES	Purchasing managers	Line item	13-2061	YES	Financial examiners	Line item
11-3071	YES	Transportation, storage, and distribution managers	Line item	13-2070	YES	Loan counselors and officers	Summary
11-9000	YES	Other management occupations	Summary	13-2071	YES	Loan counselors	Line item
11-9010	YES	Agricultural managers	Summary	13-2072	YES	Loan officers	Line item
11-9011	YES	Farm, ranch, and other agricultural managers	Line item	13-2080	YES	Tax examiners, collectors, preparers, and revenue agents	Summary
11-9012	YES	Farmers and ranchers	Line item	13-2081	YES	Tax examiners, collectors, and revenue agents	Line item
11-9021	YES	Construction managers	Line item	13-2082	YES	Tax preparers	Line item
11-9030	YES	Education administrators	Summary	13-2099	YES	All other financial specialists	Line item
11-9031	YES	Education administrators, preschool and child care center/program	Line item	15-2900	NO	Professional and related occupations	Summary
11-9032	YES	Education administrators, elementary and secondary school	Line item	15-0000	YES	Computer and mathematical science occupations	Summary
11-9033	YES	Education administrators, postsecondary	Line item	15-1000	YES	Computer specialists	Summary
11-9039	YES	Education administrators, all other	Line item	15-1011	YES	Computer and information scientists, research	Line item
11-9041	YES	Engineering managers	Line item	15-1021	YES	Computer programmers	Line item
11-9051	YES	Food service managers	Line item	15-1030	YES	Computer software engineers	Summary
11-9061	YES	Funeral directors	Line item	15-1031	YES	Computer software engineers, applications	Line item
11-9071	YES	Gaming managers	Line item	15-1032	YES	Computer software engineers, systems software	Line item
11-9081	YES	Lodging managers	Line item	15-1041	YES	Computer support specialists	Line item
11-9111	YES	Medical and health services managers	Line item	15-1051	YES	Computer systems analysts	Line item
11-9121	YES	Natural sciences managers	Line item	15-1061	YES	Database administrators	Line item
11-9131	YES	Postmasters and mail superintendents	Line item	15-1071	YES	Network and computer systems administrators	Line item
11-9141	YES	Property, real estate, and community association managers	Line item	15-1081	YES	Network systems and data communications analysts	Line item
11-9151	YES	Social and community service managers	Line item	15-1099	YES	All other computer specialists	Line item
11-9199	YES	All other managers	Line item	15-2000	YES	Mathematical science occupations	Summary
13-0000	YES	Business and financial operations occupations	Summary	15-2011	YES	Actuaries	Line item
13-1000	YES	Business operations specialists	Summary	15-2021	YES	Mathematicians	Line item
13-1011	YES	Agents and business managers of artists, performers, and athletes	Line item	15-2031	YES	Operations research analysts	Line item
13-1020	YES	Buyers and purchasing agents	Summary	15-2041	YES	Statisticians	Line item
13-1021	YES	Purchasing agents and buyers, farm products	Line item	15-2090	YES	Miscellaneous mathematical science occupations	Rollup
13-1022	YES	Wholesale and retail buyers, except farm products	Line item	15-2091	YES	Mathematical technicians	Collapse
13-1023	YES	Purchasing agents, except wholesale, retail, and farm products	Line item	15-2099	YES	Mathematical scientists, all other	Collapse
13-1030	YES	Claims adjusters, appraisers, examiners, and investigators	Summary	17-0000	YES	Architecture and engineering occupations	Summary
13-1031	YES	Claims adjusters, examiners, and investigators	Line item	17-1000	YES	Architects, surveyors, and cartographers	Summary
13-1032	YES	Insurance appraisers, auto damage	Line item	17-1010	YES	Architects, except naval	Summary
				17-1011	YES	Architects, except landscape and naval ...	Line item

Table II-1. National employment matrix occupational directory, 2002—Continued

Matrix code	Valid SOC code?	Matrix occupation title	Occupation type	Matrix code	Valid SOC code?	Matrix occupation title	Occupation type
17-1012	YES	Landscape architects	Line item	19-1099	YES	All other life scientists.....	Line item
17-1020	YES	Surveyors, cartographers, and photogrammetrists	Summary	19-2000	YES	Physical scientists	Summary
17-1021	YES	Cartographers and photogrammetrists.....	Line item	19-2010	YES	Astronomers and physicists	Summary
17-1022	YES	Surveyors	Line item	19-2011	YES	Astronomers	Line item
17-1099	NO	All other architects, surveyors, and cartographers.....	Line item	19-2012	YES	Physicists	Line item
17-2000	YES	Engineers	Summary	19-2021	YES	Atmospheric and space scientists.....	Line item
17-2011	YES	Aerospace engineers	Line item	19-2030	YES	Chemists and materials scientists.....	Summary
17-2021	YES	Agricultural engineers.....	Line item	19-2031	YES	Chemists	Line item
17-2031	YES	Biomedical engineers.....	Line item	19-2032	YES	Materials scientists	Line item
17-2041	YES	Chemical engineers.....	Line item	19-2040	YES	Environmental scientists and geoscientists	Summary
17-2051	YES	Civil engineers.....	Line item	19-2041	YES	Environmental scientists and specialists, including health	Line item
17-2061	YES	Computer hardware engineers.....	Line item	19-2042	YES	Geoscientists, except hydrologists and geographers.....	Line item
17-2070	YES	Electrical and electronics engineers.....	Summary	19-2043	YES	Hydrologists.....	Line item
17-2071	YES	Electrical engineers.....	Line item	19-2099	YES	All other physical scientists	Line item
17-2072	YES	Electronics engineers, except computer ...	Line item	19-3000	YES	Social scientists and related occupations	Summary
17-2081	YES	Environmental engineers.....	Line item	19-3011	YES	Economists.....	Line item
17-2110	YES	Industrial engineers, including health and safety	Summary	19-3020	YES	Market and survey researchers	Summary
17-2111	YES	Health and safety engineers, except mining safety engineers and inspectors.....	Line item	19-3021	YES	Market research analysts	Line item
17-2112	YES	Industrial engineers	Line item	19-3022	YES	Survey researchers	Line item
17-2121	YES	Marine engineers and naval architects.....	Line item	19-3030	YES	Psychologists	Summary
17-2131	YES	Materials engineers	Line item	19-3031	YES	Clinical, counseling, and school psychologists	Line item
17-2141	YES	Mechanical engineers.....	Line item	19-3032	YES	Industrial-organizational psychologists.....	Line item
17-2151	YES	Mining and geological engineers, including mining safety engineers.....	Line item	19-3041	YES	Sociologists	Line item
17-2161	YES	Nuclear engineers	Line item	19-3051	YES	Urban and regional planners	Line item
17-2171	YES	Petroleum engineers	Line item	19-3090	YES	Miscellaneous social scientists and related workers	Summary
17-2199	YES	All other engineers	Line item	19-3091	YES	Anthropologists and archeologists	Line item
17-3000	YES	Drafters, engineering, and mapping technicians.....	Summary	19-3092	YES	Geographers	Line item
17-3010	YES	Drafters	Summary	19-3093	YES	Historians	Line item
17-3011	YES	Architectural and civil drafters	Line item	19-3094	YES	Political scientists	Line item
17-3012	YES	Electrical and electronics drafters	Line item	19-3098	NO	All other social scientists and related workers	Line item
17-3013	YES	Mechanical drafters	Line item	19-4000	YES	Life, physical, and social science technicians.....	Summary
17-3020	YES	Engineering technicians, except drafters	Summary	19-4011	YES	Agricultural and food science technicians	Line item
17-3021	YES	Aerospace engineering and operations technicians	Line item	19-4021	YES	Biological technicians	Line item
17-3022	YES	Civil engineering technicians.....	Line item	19-4031	YES	Chemical technicians	Line item
17-3023	YES	Electrical and electronic engineering technicians.....	Line item	19-4041	YES	Geological and petroleum technicians	Line item
17-3024	YES	Electro-mechanical technicians.....	Line item	19-4051	YES	Nuclear technicians	Line item
17-3025	YES	Environmental engineering technicians.....	Line item	19-4090	YES	Other life, physical, and social science technicians.....	Summary
17-3026	YES	Industrial engineering technicians	Line item	19-4091	YES	Environmental science and protection technicians, including health.....	Line item
17-3027	YES	Mechanical engineering technicians	Line item	19-4092	YES	Forensic science technicians	Line item
17-3031	YES	Surveying and mapping technicians.....	Line item	19-4093	YES	Forest and conservation technicians.....	Line item
17-3099	NO	All other drafters, engineering, and mapping technicians	Line item	19-4098	NO	All other life, physical, and social science technicians.....	Line item
19-0000	YES	Life, physical, and social science occupations.....	Summary	21-0000	YES	Community and social services occupations.....	Summary
19-1000	YES	Life scientists.....	Summary	21-1000	YES	Counselors, social workers, and other community and social service specialists	Summary
19-1010	YES	Agricultural and food scientists.....	Line item	21-1010	YES	Counselors	Summary
19-1020	YES	Biological scientists	Summary	21-1011	YES	Substance abuse and behavioral disorder counselors	Line item
19-1021	YES	Biochemists and biophysicists.....	Line item	21-1012	YES	Educational, vocational, and school counselors	Line item
19-1022	YES	Microbiologists.....	Line item	21-1013	YES	Marriage and family therapists	Line item
19-1023	YES	Zoologists and wildlife biologists	Line item	21-1014	YES	Mental health counselors	Line item
19-1029	YES	Biological scientists, all other	Line item	21-1015	YES	Rehabilitation counselors	Line item
19-1030	YES	Conservation scientists and foresters	Summary	21-1020	YES	Social workers	Summary
19-1031	YES	Conservation scientists	Line item	21-1021	YES	Child, family, and school social workers	Line item
19-1032	YES	Foresters	Line item	21-1022	YES	Medical and public health social workers	Line item
19-1040	YES	Medical scientists	Summary				
19-1041	YES	Epidemiologists	Line item				
19-1042	YES	Medical scientists, except epidemiologists.....	Line item				

Table II-1. National employment matrix occupational directory, 2002—Continued

Matrix code	Valid SOC code?	Matrix occupation title	Occupation type	Matrix code	Valid SOC code?	Matrix occupation title	Occupation type
21-1023	YES	Mental health and substance abuse social workers	Line item	25-1081	YES	Education teachers, postsecondary	Collapse
21-1090	YES	Miscellaneous community and social service specialists	Summary	25-1082	YES	Library science teachers, postsecondary	Collapse
21-1091	YES	Health educators	Line item	25-1111	YES	Criminal justice and law enforcement teachers, postsecondary	Collapse
21-1092	YES	Probation officers and correctional treatment specialists	Line item	25-1112	YES	Law teachers, postsecondary	Collapse
21-1093	YES	Social and human service assistants	Line item	25-1113	YES	Social work teachers, postsecondary	Collapse
21-2000	YES	Religious workers	Summary	25-1121	YES	Art, drama, and music teachers, postsecondary	Collapse
21-2011	YES	Clergy	Line item	25-1122	YES	Communications teachers, postsecondary	Collapse
21-2021	YES	Directors, religious activities and education	Line item	25-1123	YES	English language and literature teachers, postsecondary	Collapse
21-9099	NO	All other counselors, social, and religious workers	Line item	25-1124	YES	Foreign language and literature teachers, postsecondary	Collapse
23-0000	YES	Legal occupations	Summary	25-1125	YES	History teachers, postsecondary	Collapse
23-1000	YES	Lawyers, judges, and related workers	Summary	25-1126	YES	Philosophy and religion teachers, postsecondary	Collapse
23-1011	YES	Lawyers	Line item	25-1191	YES	Graduate teaching assistants	Collapse
23-1020	YES	Judges, magistrates, and other judicial workers	Summary	25-1192	YES	Home economics teachers, postsecondary	Collapse
23-1021	YES	Administrative law judges, adjudicators, and hearing officers	Line item	25-1193	YES	Recreation and fitness studies teachers, postsecondary	Collapse
23-1022	YES	Arbitrators, mediators, and conciliators	Line item	25-1194	YES	Vocational education teachers, postsecondary	Collapse
23-1023	YES	Judges, magistrate judges, and magistrates	Line item	25-1198	NO	All other postsecondary teachers	Collapse
23-2000	YES	Legal support workers	Summary	25-2000	YES	Primary, secondary, and special education teachers	Summary
23-2011	YES	Paralegals and legal assistants	Line item	25-2010	YES	Preschool and kindergarten teachers	Summary
23-2090	YES	Miscellaneous legal support workers	Summary	25-2011	YES	Preschool teachers, except special education	Line item
23-2091	YES	Court reporters	Line item	25-2012	YES	Kindergarten teachers, except special education	Line item
23-2092	YES	Law clerks	Line item	25-2020	YES	Elementary and middle school teachers	Summary
23-2093	YES	Title examiners, abstractors, and searchers	Line item	25-2021	YES	Elementary school teachers, except special education	Line item
23-9099	NO	All other legal and related workers	Line item	25-2022	YES	Middle school teachers, except special and vocational education	Line item
25-0000	YES	Education, training, and library occupations	Summary	25-2023	YES	Vocational education teachers, middle school	Line item
25-1000	YES	Postsecondary teachers	Rollup	25-2030	YES	Secondary school teachers	Summary
25-1011	YES	Business teachers, postsecondary	Collapse	25-2031	YES	Secondary school teachers, except special and vocational education	Line item
25-1021	YES	Computer science teachers, postsecondary	Collapse	25-2032	YES	Vocational education teachers, secondary school	Line item
25-1022	YES	Mathematical science teachers, postsecondary	Collapse	25-2040	YES	Special education teachers	Rollup
25-1031	YES	Architecture teachers, postsecondary	Collapse	25-2041	YES	Special education teachers, preschool, kindergarten, and elementary school	Collapse
25-1032	YES	Engineering teachers, postsecondary	Collapse	25-2042	YES	Special education teachers, middle school	Collapse
25-1041	YES	Agricultural sciences teachers, postsecondary	Collapse	25-2043	YES	Special education teachers, secondary school	Collapse
25-1042	YES	Biological science teachers, postsecondary	Collapse	25-3000	YES	Other teachers and instructors	Summary
25-1043	YES	Forestry and conservation science teachers, postsecondary	Collapse	25-3011	YES	Adult literacy, remedial education, and GED teachers and instructors	Line item
25-1051	YES	Atmospheric, earth, marine, and space sciences teachers, postsecondary	Collapse	25-3021	YES	Self-enrichment education teachers	Line item
25-1052	YES	Chemistry teachers, postsecondary	Collapse	25-3999	NO	All other teachers, primary, secondary, and adult	Line item
25-1053	YES	Environmental science teachers, postsecondary	Collapse	25-4000	YES	Librarians, curators, and archivists	Summary
25-1054	YES	Physics teachers, postsecondary	Collapse	25-4010	YES	Archivists, curators, and museum technicians	Line item
25-1061	YES	Anthropology and archeology teachers, postsecondary	Collapse	25-4021	YES	Librarians	Line item
25-1062	YES	Area, ethnic, and cultural studies teachers, postsecondary	Collapse	25-4031	YES	Library technicians	Line item
25-1063	YES	Economics teachers, postsecondary	Collapse	25-9000	YES	Other education, training, and library occupations	Summary
25-1064	YES	Geography teachers, postsecondary	Collapse	25-9011	YES	Audio-visual collections specialists	Line item
25-1065	YES	Political science teachers, postsecondary	Collapse	25-9021	YES	Farm and home management advisors	Line item
25-1066	YES	Psychology teachers, postsecondary	Collapse	25-9031	YES	Instructional coordinators	Line item
25-1067	YES	Sociology teachers, postsecondary	Collapse	25-9041	YES	Teacher assistants	Line item
25-1071	YES	Health specialties teachers, postsecondary	Collapse				
25-1072	YES	Nursing instructors and teachers, postsecondary	Collapse				

Table II-1. National employment matrix occupational directory, 2002—Continued

Matrix code	Valid SOC code?	Matrix occupation title	Occupation type	Matrix code	Valid SOC code?	Matrix occupation title	Occupation type
25-9199	NO	All other library, museum, training, and other education workers.....	Line item	27-4099	YES	All other media and communication equipment workers.....	Line item
27-0000	YES	Arts, design, entertainment, sports, and media occupations.....	Summary	29-0000	YES	Healthcare practitioners and technical occupations.....	Summary
27-1000	YES	Art and design occupations.....	Summary	29-1000	YES	Health diagnosing and treating practitioners.....	Summary
27-1010	YES	Artists and related workers.....	Summary	29-1011	YES	Chiropractors.....	Line item
27-1011	YES	Art directors.....	Line item	29-1020	YES	Dentists.....	Line item
27-1013	YES	Fine artists, including painters, sculptors, and illustrators.....	Line item	29-1031	YES	Dietitians and nutritionists.....	Line item
27-1014	YES	Multi-media artists and animators.....	Line item	29-1041	YES	Optometrists.....	Line item
27-1020	YES	Designers.....	Summary	29-1051	YES	Pharmacists.....	Line item
27-1021	YES	Commercial and industrial designers.....	Line item	29-1060	YES	Physicians and surgeons.....	Rollup
27-1022	YES	Fashion designers.....	Line item	29-1061	YES	Anesthesiologists.....	Collapse
27-1023	YES	Floral designers.....	Line item	29-1062	YES	Family and general practitioners.....	Collapse
27-1024	YES	Graphic designers.....	Line item	29-1063	YES	Internists, general.....	Collapse
27-1025	YES	Interior designers.....	Line item	29-1064	YES	Obstetricians and gynecologists.....	Collapse
27-1026	YES	Merchandise displays and window trimmers.....	Line item	29-1065	YES	Pediatricians, general.....	Collapse
27-1027	YES	Set and exhibit designers.....	Line item	29-1066	YES	Psychiatrists.....	Collapse
27-1099	NO	All other art and design workers.....	Line item	29-1067	YES	Surgeons.....	Collapse
27-2000	YES	Entertainers and performers, sports and related occupations.....	Summary	29-1069	YES	Physicians and surgeons, all other.....	Collapse
27-2010	YES	Actors, producers, and directors.....	Summary	29-1071	YES	Physician assistants.....	Line item
27-2011	YES	Actors.....	Line item	29-1081	YES	Podiatrists.....	Line item
27-2012	YES	Producers and directors.....	Line item	29-1111	YES	Registered nurses.....	Line item
27-2020	YES	Athletes, coaches, umpires, and related workers.....	Summary	29-1120	YES	Therapists.....	Summary
27-2021	YES	Athletes and sports competitors.....	Line item	29-1121	YES	Audiologists.....	Line item
27-2022	YES	Coaches and scouts.....	Line item	29-1122	YES	Occupational therapists.....	Line item
27-2023	YES	Umpires, referees, and other sports officials.....	Line item	29-1123	YES	Physical therapists.....	Line item
27-2030	YES	Dancers and choreographers.....	Summary	29-1124	YES	Radiation therapists.....	Line item
27-2031	YES	Dancers.....	Line item	29-1125	YES	Recreational therapists.....	Line item
27-2032	YES	Choreographers.....	Line item	29-1126	YES	Respiratory therapists.....	Line item
27-2040	YES	Musicians, singers, and related workers.....	Summary	29-1127	YES	Speech-language pathologists.....	Line item
27-2041	YES	Music directors and composers.....	Line item	29-1131	YES	Veterinarians.....	Line item
27-2042	YES	Musicians and singers.....	Line item	29-1198	NO	All other health diagnosing and treating practitioners.....	Line item
27-2099	YES	All other entertainers and performers, sports and related workers.....	Line item	29-2000	YES	Health technologists and technicians.....	Summary
27-3000	YES	Media and communication occupations.....	Summary	29-2010	YES	Clinical laboratory technologists and technicians.....	Summary
27-3010	YES	Announcers.....	Line item	29-2011	YES	Medical and clinical laboratory technologists.....	Line item
27-3020	YES	News analysts, reporters, and correspondents.....	Line item	29-2012	YES	Medical and clinical laboratory technicians.....	Line item
27-3031	YES	Public relations specialists.....	Line item	29-2021	YES	Dental hygienists.....	Line item
27-3040	YES	Writers and editors.....	Summary	29-2030	YES	Diagnostic related technologists and technicians.....	Summary
27-3041	YES	Editors.....	Line item	29-2031	YES	Cardiovascular technologists and technicians.....	Line item
27-3042	YES	Technical writers.....	Line item	29-2032	YES	Diagnostic medical sonographers.....	Line item
27-3043	YES	Writers and authors.....	Line item	29-2033	YES	Nuclear medicine technologists.....	Line item
27-3090	YES	Miscellaneous media and communications workers.....	Summary	29-2034	YES	Radiologic technologists and technicians.....	Line item
27-3091	YES	Interpreters and translators.....	Line item	29-2041	YES	Emergency medical technicians and paramedics.....	Line item
27-3099	YES	All other media and communication workers.....	Line item	29-2050	YES	Health diagnosing and treating practitioner support technicians.....	Summary
27-4000	YES	Media and communication equipment occupations.....	Summary	29-2051	YES	Dietetic technicians.....	Line item
27-4010	YES	Broadcast and sound engineering technicians and radio operators.....	Summary	29-2052	YES	Pharmacy technicians.....	Line item
27-4011	YES	Audio and video equipment technicians.....	Line item	29-2053	YES	Psychiatric technicians.....	Line item
27-4012	YES	Broadcast technicians.....	Line item	29-2054	YES	Respiratory therapy technicians.....	Line item
27-4013	YES	Radio operators.....	Line item	29-2055	YES	Surgical technologists.....	Line item
27-4014	YES	Sound engineering technicians.....	Line item	29-2056	YES	Veterinary technologists and technicians.....	Line item
27-4021	YES	Photographers.....	Line item	29-2061	YES	Licensed practical and licensed vocational nurses.....	Line item
27-4030	YES	Television, video, and motion picture camera operators and editors.....	Summary	29-2071	YES	Medical records and health information technicians.....	Line item
27-4031	YES	Camera operators, television, video, and motion picture.....	Line item	29-2081	YES	Opticians, dispensing.....	Line item
27-4032	YES	Film and video editors.....	Line item	29-2090	YES	Miscellaneous health technologists and technicians.....	Summary

Table II-1. National employment matrix occupational directory, 2002—Continued

Matrix code	Valid SOC code?	Matrix occupation title	Occupation type	Matrix code	Valid SOC code?	Matrix occupation title	Occupation type
29-2091	YES	Orthotists and prosthetists.....	Line item	33-9011	YES	Animal control workers.....	Line item
29-9000	YES	Other healthcare practitioners and technical occupations.....	Summary	33-9021	YES	Private detectives and investigators.....	Line item
29-9010	YES	Occupational health and safety specialists and technicians.....	Line item	33-9030	YES	Security guards and gaming surveillance officers.....	Summary
29-9090	YES	Miscellaneous health practitioners and technical workers.....	Summary	33-9031	YES	Gaming surveillance officers and gaming investigators.....	Line item
29-9091	YES	Athletic trainers.....	Line item	33-9032	YES	Security guards.....	Line item
29-9199	NO	All other health practitioners and technical workers.....	Line item	33-9091	YES	Crossing guards.....	Line item
31-3900	NO	Service occupations.....	Summary	33-9095	NO	All other protective service workers.....	Line item
31-0000	YES	Healthcare support occupations.....	Summary	35-0000	YES	Food preparation and serving related occupations.....	Summary
31-1000	YES	Nursing, psychiatric, and home health aides.....	Summary	35-1000	YES	Supervisors, food preparation and serving workers.....	Summary
31-1011	YES	Home health aides.....	Line item	35-1011	YES	Chefs and head cooks.....	Line item
31-1012	YES	Nursing aides, orderlies, and attendants.....	Line item	35-1012	YES	First-line supervisors/managers of food preparation and serving workers.....	Line item
31-1013	YES	Psychiatric aides.....	Line item	35-2000	YES	Cooks and food preparation workers.....	Summary
31-2000	YES	Occupational and physical therapist assistants and aides.....	Summary	35-2010	YES	Cooks.....	Summary
31-2010	YES	Occupational therapist assistants and aides.....	Summary	35-2011	YES	Cooks, fast food.....	Line item
31-2011	YES	Occupational therapist assistants.....	Line item	35-2012	YES	Cooks, institution and cafeteria.....	Line item
31-2012	YES	Occupational therapist aides.....	Line item	35-2013	YES	Cooks, private household.....	Line item
31-2020	YES	Physical therapist assistants and aides.....	Summary	35-2014	YES	Cooks, restaurant.....	Line item
31-2021	YES	Physical therapist assistants.....	Line item	35-2015	YES	Cooks, short order.....	Line item
31-2022	YES	Physical therapist aides.....	Line item	35-2021	YES	Food preparation workers.....	Line item
31-9000	YES	Other healthcare support occupations.....	Summary	35-3000	YES	Food and beverage serving workers.....	Summary
31-9011	YES	Massage therapists.....	Line item	35-3011	YES	Bartenders.....	Line item
31-9090	YES	Miscellaneous healthcare support occupations.....	Summary	35-3020	YES	Fast food and counter workers.....	Summary
31-9091	YES	Dental assistants.....	Line item	35-3021	YES	Combined food preparation and serving workers, including fast food.....	Line item
31-9092	YES	Medical assistants.....	Line item	35-3022	YES	Counter attendants, cafeteria, food concession, and coffee shop.....	Line item
31-9093	YES	Medical equipment preparers.....	Line item	35-3031	YES	Waiters and waitresses.....	Line item
31-9094	YES	Medical transcriptionists.....	Line item	35-3041	YES	Food servers, nonrestaurant.....	Line item
31-9095	YES	Pharmacy aides.....	Line item	35-9000	YES	Other food preparation and serving related workers.....	Summary
31-9096	YES	Veterinary assistants and laboratory animal caretakers.....	Line item	35-9011	YES	Dining room and cafeteria attendants and bartender helpers.....	Line item
33-0000	YES	Protective service occupations.....	Summary	35-9021	YES	Dishwashers.....	Line item
33-1000	YES	First-line supervisors/managers, protective service workers.....	Summary	35-9031	YES	Hosts and hostesses, restaurant, lounge, and coffee shop.....	Line item
33-1010	YES	First-line supervisors/managers, law enforcement workers.....	Summary	35-9098	NO	All other food preparation and serving related workers.....	Line item
33-1011	YES	First-line supervisors/managers of correctional officers.....	Line item	37-0000	YES	Building and grounds cleaning and maintenance occupations.....	Summary
33-1012	YES	First-line supervisors/managers of police and detectives.....	Line item	37-1000	YES	Supervisors, building and grounds cleaning and maintenance workers.....	Summary
33-1021	YES	First-line supervisors/managers of fire fighting and prevention workers.....	Line item	37-1011	YES	First-line supervisors/managers of housekeeping and janitorial workers.....	Line item
33-1099	YES	All other first-line supervisors/managers, protective service workers.....	Line item	37-1012	YES	First-line supervisors/managers of landscaping, lawn service, and groundskeeping workers.....	Line item
33-2000	YES	Fire fighting and prevention workers.....	Summary	37-2000	YES	Building cleaning and pest control workers.....	Summary
33-2011	YES	Fire fighters.....	Line item	37-2010	YES	Building cleaning workers.....	Summary
33-2020	YES	Fire inspectors.....	Rollup	37-2011	YES	Janitors and cleaners, except maids and housekeeping cleaners.....	Line item
33-2021	YES	Fire inspectors and investigators.....	Collapse	37-2012	YES	Maids and housekeeping cleaners.....	Line item
33-2022	YES	Forest fire inspectors and prevention specialists.....	Collapse	37-2021	YES	Pest control workers.....	Line item
33-3000	YES	Law enforcement workers.....	Summary	37-3000	YES	Grounds maintenance workers.....	Summary
33-3010	YES	Bailiffs, correctional officers, and jailers.....	Summary	37-3010	YES	Grounds maintenance workers.....	Summary
33-3011	YES	Bailiffs.....	Line item	37-3011	YES	Landscaping and groundskeeping workers.....	Line item
33-3012	YES	Correctional officers and jailers.....	Line item	37-3012	YES	Pesticide handlers, sprayers, and applicators, vegetation.....	Line item
33-3021	YES	Detectives and criminal investigators.....	Line item	37-3013	YES	Tree trimmers and pruners.....	Line item
33-3031	YES	Fish and game wardens.....	Line item	37-9099	NO	All other building and grounds cleaning and maintenance workers.....	Line item
33-3041	YES	Parking enforcement workers.....	Line item	39-0000	YES	Personal care and service occupations.....	Summary
33-3050	YES	Police officers.....	Summary				
33-3051	YES	Police and sheriff's patrol officers.....	Line item				
33-3052	YES	Transit and railroad police.....	Line item				
33-9000	YES	Other protective service workers.....	Summary				

Table II-1. National employment matrix occupational directory, 2002—Continued

Matrix code	Valid SOC code?	Matrix occupation title	Occupation type	Matrix code	Valid SOC code?	Matrix occupation title	Occupation type
39-1000	YES	Supervisors, personal care and service workers	Summary	41-1012	YES	First-line supervisors/managers of non-retail sales workers	Line item
39-1010	YES	First-line supervisors/managers of gaming workers	Summary	41-2000	YES	Retail sales workers	Summary
39-1011	YES	Gaming supervisors	Line item	41-2010	YES	Cashiers	Summary
39-1012	YES	Slot key persons	Line item	41-2011	YES	Cashiers, except gaming	Line item
39-1021	YES	First-line supervisors/managers of personal service workers	Line item	41-2012	YES	Gaming change persons and booth cashiers	Line item
39-2000	YES	Animal care and service workers	Summary	41-2020	YES	Counter and rental clerks and parts salespersons	Summary
39-2011	YES	Animal trainers	Line item	41-2021	YES	Counter and rental clerks	Line item
39-2021	YES	Nonfarm animal caretakers	Line item	41-2022	YES	Parts salespersons	Line item
39-3000	YES	Entertainment attendants and related workers	Summary	41-2031	YES	Retail salespersons	Line item
39-3010	YES	Gaming services workers	Summary	41-3000	YES	Sales representatives, services	Summary
39-3011	YES	Gaming dealers	Line item	41-3011	YES	Advertising sales agents	Line item
39-3012	YES	Gaming and sports book writers and runners	Line item	41-3021	YES	Insurance sales agents	Line item
39-3021	YES	Motion picture projectionists	Line item	41-3031	YES	Securities, commodities, and financial services sales agents	Line item
39-3031	YES	Ushers, lobby attendants, and ticket takers	Line item	41-3041	YES	Travel agents	Line item
39-3090	YES	Miscellaneous entertainment attendants and related workers	Summary	41-4000	YES	Sales representatives, wholesale and manufacturing	Summary
39-3091	YES	Amusement and recreation attendants	Line item	41-4011	YES	Sales representatives, wholesale and manufacturing, technical and scientific products	Line item
39-3092	YES	Costume attendants	Line item	41-4012	YES	Sales representatives, wholesale and manufacturing, except technical and scientific products	Line item
39-3093	YES	Locker room, coatroom, and dressing room attendants	Line item	41-9000	YES	Other sales and related workers	Summary
39-3199	NO	All other gaming service workers	Line item	41-9010	YES	Models, demonstrators, and product promoters	Summary
39-4000	YES	Funeral service workers	Summary	41-9011	YES	Demonstrators and product promoters	Line item
39-4011	YES	Embalmers	Line item	41-9012	YES	Models	Line item
39-4021	YES	Funeral attendants	Line item	41-9020	YES	Real estate brokers and sales agents	Summary
39-5000	YES	Personal appearance workers	Summary	41-9021	YES	Real estate brokers	Line item
39-5010	YES	Barbers and cosmetologists	Summary	41-9022	YES	Real estate sales agents	Line item
39-5011	YES	Barbers	Line item	41-9031	YES	Sales engineers	Line item
39-5012	YES	Hairdressers, hairstylists, and cosmetologists	Line item	41-9041	YES	Telemarketers	Line item
39-5090	YES	Miscellaneous personal appearance workers	Summary	41-9091	YES	Door-to-door sales workers, news and street vendors, and related workers	Line item
39-5091	YES	Makeup artists, theatrical and performance	Line item	41-9098	NO	All other sales and related workers	Line item
39-5092	YES	Manicurists and pedicurists	Line item	43-0000	YES	Office and administrative support occupations	Summary
39-5093	YES	Shampoosers	Line item	43-1000	YES	Supervisors, office and administrative support workers	Summary
39-5094	YES	Skin care specialists	Line item	43-1011	YES	First-line supervisors/managers of office and administrative support workers	Line item
39-6000	YES	Transportation, tourism, and lodging attendants	Summary	43-2000	YES	Communications equipment operators	Summary
39-6010	YES	Baggage porters, bellhops, and concierges	Summary	43-2011	YES	Switchboard operators, including answering service	Line item
39-6011	YES	Baggage porters and bellhops	Line item	43-2021	YES	Telephone operators	Line item
39-6012	YES	Concierges	Line item	43-2099	YES	All other communications equipment operators	Line item
39-6020	YES	Tour and travel guides	Summary	43-3000	YES	Financial clerks	Summary
39-6021	YES	Tour guides and escorts	Line item	43-3011	YES	Bill and account collectors	Line item
39-6022	YES	Travel guides	Line item	43-3021	YES	Billing and posting clerks and machine operators	Line item
39-6030	YES	Transportation attendants	Summary	43-3031	YES	Bookkeeping, accounting, and auditing clerks	Line item
39-6031	YES	Flight attendants	Line item	43-3041	YES	Gaming cage workers	Line item
39-6032	YES	Transportation attendants, except flight attendants and baggage porters	Line item	43-3051	YES	Payroll and timekeeping clerks	Line item
39-9000	YES	Other personal care and service workers	Summary	43-3061	YES	Procurement clerks	Line item
39-9011	YES	Child care workers	Line item	43-3071	YES	Tellers	Line item
39-9021	YES	Personal and home care aides	Line item	43-4000	YES	Information and record clerks	Summary
39-9030	YES	Recreation and fitness workers	Summary	43-4011	YES	Brokerage clerks	Line item
39-9031	YES	Fitness trainers and aerobics instructors	Line item	43-4021	YES	Correspondence clerks	Line item
39-9032	YES	Recreation workers	Line item	43-4031	YES	Court, municipal, and license clerks	Line item
39-9041	YES	Residential advisors	Line item	43-4041	YES	Credit authorizers, checkers, and clerks	Line item
39-9099	YES	Personal care and service workers, all other	Line item	43-4051	YES	Customer service representatives	Line item
41-0000	YES	Sales and related occupations	Summary				
41-1000	YES	Supervisors, sales workers	Summary				
41-1011	YES	First-line supervisors/managers of retail sales workers	Line item				

Table II-1. National employment matrix occupational directory, 2002—Continued

Matrix code	Valid SOC code?	Matrix occupation title	Occupation type	Matrix code	Valid SOC code?	Matrix occupation title	Occupation type
43-4061	YES	Eligibility interviewers, government programs.....	Line item	45-1011	YES	First-line supervisors/managers of farming, fishing, and forestry workers.....	Collapse
43-4071	YES	File clerks.....	Line item	45-1012	YES	Farm labor contractors.....	Collapse
43-4081	YES	Hotel, motel, and resort desk clerks.....	Line item	45-2000	YES	Agricultural workers.....	Summary
43-4111	YES	Interviewers, except eligibility and loan.....	Line item	45-2011	YES	Agricultural inspectors.....	Line item
43-4121	YES	Library assistants, clerical.....	Line item	45-2021	YES	Animal breeders.....	Line item
43-4131	YES	Loan interviewers and clerks.....	Line item	45-2041	YES	Graders and sorters, agricultural products.....	Line item
43-4141	YES	New accounts clerks.....	Line item	45-2090	YES	Miscellaneous agricultural workers.....	Summary
43-4151	YES	Order clerks.....	Line item	45-2091	YES	Agricultural equipment operators.....	Line item
43-4161	YES	Human resources assistants, except payroll and timekeeping.....	Line item	45-2092	YES	Farmworkers and laborers, crop, nursery, and greenhouse.....	Line item
43-4171	YES	Receptionists and information clerks.....	Line item	45-2093	YES	Farmworkers, farm and ranch animals.....	Line item
43-4181	YES	Reservation and transportation ticket agents and travel clerks.....	Line item	45-3000	YES	Fishing and hunting workers.....	Summary
43-4999	NO	All other financial, information, and record clerks.....	Line item	45-3011	YES	Fishers and related fishing workers.....	Line item
43-5000	YES	Material recording, scheduling, dispatching, and distributing occupations.....	Summary	45-3021	YES	Hunters and trappers.....	Line item
43-5011	YES	Cargo and freight agents.....	Line item	45-4000	YES	Forest, conservation, and logging workers.....	Summary
43-5021	YES	Couriers and messengers.....	Line item	45-4011	YES	Forest and conservation workers.....	Line item
43-5030	YES	Dispatchers.....	Summary	45-4020	YES	Logging workers.....	Summary
43-5031	YES	Police, fire, and ambulance dispatchers.....	Line item	45-4021	YES	Fallers.....	Line item
43-5032	YES	Dispatchers, except police, fire, and ambulance.....	Line item	45-4022	YES	Logging equipment operators.....	Line item
43-5041	YES	Meter readers, utilities.....	Line item	45-4023	YES	Log graders and scalers.....	Line item
43-5050	YES	Postal service workers.....	Summary	45-9099	NO	All other farming, fishing, and forestry workers.....	Line item
43-5051	YES	Postal service clerks.....	Line item	47-0000	YES	Construction and extraction occupations.....	Summary
43-5052	YES	Postal service mail carriers.....	Line item	47-1000	YES	Supervisors, construction and extraction workers.....	Summary
43-5053	YES	Postal service mail sorters, processors, and processing machine operators.....	Line item	47-1011	YES	First-line supervisors/managers of construction trades and extraction workers.....	Line item
43-5061	YES	Production, planning, and expediting clerks..	Line item	47-2000	YES	Construction trades and related workers.....	Summary
43-5071	YES	Shipping, receiving, and traffic clerks.....	Line item	47-2011	YES	Boilermakers.....	Line item
43-5081	YES	Stock clerks and order fillers.....	Line item	47-2020	YES	Brickmasons, blockmasons, and stonemasons.....	Summary
43-5111	YES	Weighers, measurers, checkers, and samplers, recordkeeping.....	Line item	47-2021	YES	Brickmasons and blockmasons.....	Line item
43-5199	NO	All other material recording, scheduling, dispatching, and distributing workers.....	Line item	47-2022	YES	Stonemasons.....	Line item
43-6000	YES	Secretaries and administrative assistants.....	Summary	47-2031	YES	Carpenters.....	Line item
43-6011	YES	Executive secretaries and administrative assistants.....	Line item	47-2040	YES	Carpet, floor, and tile installers and finishers.....	Summary
43-6012	YES	Legal secretaries.....	Line item	47-2041	YES	Carpet installers.....	Line item
43-6013	YES	Medical secretaries.....	Line item	47-2042	YES	Floor layers, except carpet, wood, and hard tiles.....	Line item
43-6014	YES	Secretaries, except legal, medical, and executive.....	Line item	47-2043	YES	Floor sanders and finishers.....	Line item
43-9000	YES	Other office and administrative support workers.....	Summary	47-2044	YES	Tile and marble setters.....	Line item
43-9011	YES	Computer operators.....	Line item	47-2050	YES	Cement masons, concrete finishers, and terrazzo workers.....	Summary
43-9020	YES	Data entry and information processing workers.....	Summary	47-2051	YES	Cement masons and concrete finishers.....	Line item
43-9021	YES	Data entry keyers.....	Line item	47-2053	YES	Terrazzo workers and finishers.....	Line item
43-9022	YES	Word processors and typists.....	Line item	47-2061	YES	Construction laborers.....	Line item
43-9031	YES	Desktop publishers.....	Line item	47-2070	YES	Construction equipment operators.....	Summary
43-9041	YES	Insurance claims and policy processing clerks.....	Line item	47-2071	YES	Paving, surfacing, and tamping equipment operators.....	Line item
43-9051	YES	Mail clerks and mail machine operators, except postal service.....	Line item	47-2072	YES	Pile-driver operators.....	Line item
43-9061	YES	Office clerks, general.....	Line item	47-2073	YES	Operating engineers and other construction equipment operators.....	Line item
43-9071	YES	Office machine operators, except computer.....	Line item	47-2080	YES	Drywall installers, ceiling tile installers, and tapers.....	Summary
43-9081	YES	Proofreaders and copy markers.....	Line item	47-2081	YES	Drywall and ceiling tile installers.....	Line item
43-9111	YES	Statistical assistants.....	Line item	47-2082	YES	Tapers.....	Line item
43-9999	NO	All other secretaries, administrative assistants, and other office support workers.....	Line item	47-2111	YES	Electricians.....	Line item
45-0000	YES	Farming, fishing, and forestry occupations.....	Summary	47-2121	YES	Glaziers.....	Line item
45-1000	YES	Supervisors, farming, fishing, and forestry workers.....	Rollup	47-2130	YES	Insulation workers.....	Line item
				47-2140	YES	Painters and paperhangers.....	Summary
				47-2141	YES	Painters, construction and maintenance.....	Line item
				47-2142	YES	Paperhangers.....	Line item
				47-2150	YES	Pipelayers, plumbers, pipefitters, and steamfitters.....	Summary
				47-2151	YES	Pipelayers.....	Line item

Table II-1. National employment matrix occupational directory, 2002—Continued

Matrix code	Valid SOC code?	Matrix occupation title	Occupation type	Matrix code	Valid SOC code?	Matrix occupation title	Occupation type
47-2152	YES	Plumbers, pipefitters, and steamfitters	Line item	49-2090	YES	Miscellaneous electrical and electronic equipment mechanics, installers, and repairers	Summary
47-2161	YES	Plasterers and stucco masons	Line item	49-2091	YES	Avionics technicians	Line item
47-2171	YES	Reinforcing iron and rebar workers	Line item	49-2092	YES	Electric motor, power tool, and related repairers	Line item
47-2181	YES	Roofers	Line item	49-2093	YES	Electrical and electronics installers and repairers, transportation equipment	Line item
47-2211	YES	Sheet metal workers	Line item	49-2094	YES	Electrical and electronics repairers, commercial and industrial equipment	Line item
47-2221	YES	Structural iron and steel workers	Line item	49-2095	YES	Electrical and electronics repairers, powerhouse, substation, and relay	Line item
47-3000	YES	Helpers, construction trades	Summary	49-2096	YES	Electronic equipment installers and repairers, motor vehicles	Line item
47-3010	YES	Helpers, construction trades	Summary	49-2097	YES	Electronic home entertainment equipment installers and repairers	Line item
47-3011	YES	Helpers—brickmasons, blockmasons, stonemasons, and tile and marble setters	Line item	49-2098	YES	Security and fire alarm systems installers	Line item
47-3012	YES	Helpers—carpenters	Line item	49-2099	NO	All other electrical and electronic equipment mechanics, installers, and repairers	Line item
47-3013	YES	Helpers—electricians	Line item	49-3000	YES	Vehicle and mobile equipment mechanics, installers, and repairers	Summary
47-3014	YES	Helpers—painters, paperhangers, plasterers, and stucco masons	Line item	49-3011	YES	Aircraft mechanics and service technicians	Line item
47-3015	YES	Helpers—pipelayers, plumbers, pipefitters, and steamfitters	Line item	49-3020	YES	Automotive technicians and repairers	Summary
47-3016	YES	Helpers—roofers	Line item	49-3021	YES	Automotive body and related repairers	Line item
47-3019	YES	All other helpers, construction trades	Line item	49-3022	YES	Automotive glass installers and repairers	Line item
47-4000	YES	Other construction and related workers	Summary	49-3023	YES	Automotive service technicians and mechanics	Line item
47-4011	YES	Construction and building inspectors	Line item	49-3031	YES	Bus and truck mechanics and diesel engine specialists	Line item
47-4021	YES	Elevator installers and repairers	Line item	49-3040	YES	Heavy vehicle and mobile equipment service technicians and mechanics	Summary
47-4031	YES	Fence erectors	Line item	49-3041	YES	Farm equipment mechanics	Line item
47-4041	YES	Hazardous materials removal workers	Line item	49-3042	YES	Mobile heavy equipment mechanics, except engines	Line item
47-4051	YES	Highway maintenance workers	Line item	49-3043	YES	Rail car repairers	Line item
47-4061	YES	Rail-track laying and maintenance equipment operators	Line item	49-3050	YES	Small engine mechanics	Summary
47-4071	YES	Septic tank servicers and sewer pipe cleaners	Line item	49-3051	YES	Motorboat mechanics	Line item
47-4090	YES	Miscellaneous construction and related workers	Summary	49-3052	YES	Motorcycle mechanics	Line item
47-4091	YES	Segmental pavers	Line item	49-3053	YES	Outdoor power equipment and other small engine mechanics	Line item
47-4999	NO	All other construction trades and related workers	Line item	49-3090	YES	Miscellaneous vehicle and mobile equipment mechanics, installers, and repairers	Summary
47-5000	YES	Extraction workers	Summary	49-3091	YES	Bicycle repairers	Line item
47-5010	YES	Derrick, rotary drill, and service unit operators, oil, gas, and mining	Summary	49-3092	YES	Recreational vehicle service technicians	Line item
47-5011	YES	Derrick operators, oil and gas	Line item	49-3093	YES	Tire repairers and changers	Line item
47-5012	YES	Rotary drill operators, oil and gas	Line item	49-3099	NO	All other vehicle and mobile equipment mechanics, installers, and repairers	Line item
47-5013	YES	Service unit operators, oil, gas, and mining	Line item	49-9000	YES	Other installation, maintenance, and repair occupations	Summary
47-5021	YES	Earth drillers, except oil and gas	Line item	49-9010	YES	Control and valve installers and repairers	Summary
47-5031	YES	Explosives workers, ordnance handling experts, and blasters	Line item	49-9011	YES	Mechanical door repairers	Line item
47-5040	YES	Mining machine operators	Summary	49-9012	YES	Control and valve installers and repairers, except mechanical door	Line item
47-5041	YES	Continuous mining machine operators	Line item	49-9021	YES	Heating, air conditioning, and refrigeration mechanics and installers	Line item
47-5042	YES	Mine cutting and channeling machine operators	Line item	49-9031	YES	Home appliance repairers	Line item
47-5049	YES	All other mining machine operators	Line item	49-9040	YES	Industrial machinery installation, repair, and maintenance workers	Summary
47-5051	YES	Rock splitters, quarry	Line item	49-9041	YES	Industrial machinery mechanics	Line item
47-5061	YES	Roof bolters, mining	Line item				
47-5071	YES	Roustabouts, oil and gas	Line item				
47-5081	YES	Helpers—extraction workers	Line item				
47-5099	YES	Extraction workers, all other	Line item				
49-0000	YES	Installation, maintenance, and repair occupations	Summary				
49-1000	YES	Supervisors of installation, maintenance, and repair workers	Summary				
49-1011	YES	First-line supervisors/managers of mechanics, installers, and repairers	Line item				
49-2000	YES	Electrical and electronic equipment mechanics, installers, and repairers	Summary				
49-2011	YES	Computer, automated teller, and office machine repairers	Line item				
49-2020	YES	Radio and telecommunications equipment installers and repairers	Summary				
49-2021	YES	Radio mechanics	Line item				
49-2022	YES	Telecommunications equipment installers and repairers, except line installers	Line item				

Table II-1. National employment matrix occupational directory, 2002—Continued

Matrix code	Valid SOC code?	Matrix occupation title	Occupation type	Matrix code	Valid SOC code?	Matrix occupation title	Occupation type
49-9042	YES	Maintenance and repair workers, general ...	Line item	51-3093	YES	Food cooking machine operators and tenders.....	Line item
49-9043	YES	Maintenance workers, machinery.....	Line item	51-3099	NO	All other food processing workers.....	Line item
49-9044	YES	Millwrights.....	Line item	51-4000	YES	Metal workers and plastic workers.....	Summary
49-9045	YES	Refractory materials repairers, except brickmasons.....	Line item	51-4010	YES	Computer control programmers and operators.....	Summary
49-9050	YES	Line installers and repairers.....	Summary	51-4011	YES	Computer-controlled machine tool operators, metal and plastic.....	Line item
49-9051	YES	Electrical power-line installers and repairers.....	Line item	51-4012	YES	Numerical tool and process control programmers.....	Line item
49-9052	YES	Telecommunications line installers and repairers.....	Line item	51-4020	YES	Forming machine setters, operators, and tenders, metal and plastic.....	Summary
49-9060	YES	Precision instrument and equipment repairers.....	Summary	51-4021	YES	Extruding and drawing machine setters, operators, and tenders, metal and plastic.....	Line item
49-9061	YES	Camera and photographic equipment repairers.....	Line item	51-4022	YES	Forging machine setters, operators, and tenders, metal and plastic.....	Line item
49-9062	YES	Medical equipment repairers.....	Line item	51-4023	YES	Rolling machine setters, operators, and tenders, metal and plastic.....	Line item
49-9063	YES	Musical instrument repairers and tuners.....	Line item	51-4030	YES	Machine tool cutting setters, operators, and tenders, metal and plastic.....	Summary
49-9064	YES	Watch repairers.....	Line item	51-4031	YES	Cutting, punching, and press machine setters, operators, and tenders, metal and plastic.....	Line item
49-9069	YES	All other precision instrument and equipment repairers.....	Line item	51-4032	YES	Drilling and boring machine tool setters, operators, and tenders, metal and plastic.....	Line item
49-9090	YES	Miscellaneous installation, maintenance, and repair workers.....	Summary	51-4033	YES	Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic.....	Line item
49-9091	YES	Coin, vending, and amusement machine servicers and repairers.....	Line item	51-4034	YES	Lathe and turning machine tool setters, operators, and tenders, metal and plastic.....	Line item
49-9092	YES	Commercial divers.....	Line item	51-4035	YES	Milling and planing machine setters, operators, and tenders, metal and plastic.....	Line item
49-9093	YES	Fabric menders, except garment.....	Line item	51-4041	YES	Machinists.....	Line item
49-9094	YES	Locksmiths and safe repairers.....	Line item	51-4050	YES	Metal furnace and kiln operators and tenders.....	Summary
49-9095	YES	Manufactured building and mobile home installers.....	Line item	51-4051	YES	Metal-refining furnace operators and tenders.....	Line item
49-9096	YES	Riggers.....	Line item	51-4052	YES	Pourers and casters, metal.....	Line item
49-9097	YES	Signal and track switch repairers.....	Line item	51-4060	YES	Model makers and patternmakers, metal and plastic.....	Summary
49-9098	YES	Helpers—Installation, maintenance, and repair workers.....	Line item	51-4061	YES	Model makers, metal and plastic.....	Line item
49-9099	YES	Installation, maintenance, and repair workers, all other.....	Line item	51-4062	YES	Patternmakers, metal and plastic.....	Line item
51-0000	YES	Production occupations.....	Summary	51-4070	YES	Molders and molding machine setters, operators, and tenders, metal and plastic.....	Summary
51-1000	YES	Supervisors, production workers.....	Summary	51-4071	YES	Foundry mold and coremakers.....	Line item
51-1011	YES	First-line supervisors/managers of production and operating workers.....	Line item	51-4072	YES	Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic.....	Line item
51-2000	YES	Assemblers and fabricators.....	Summary	51-4081	YES	Multiple machine tool setters, operators, and tenders, metal and plastic.....	Line item
51-2011	YES	Aircraft structure, surfaces, rigging, and systems assemblers.....	Line item	51-4111	YES	Tool and die makers.....	Line item
51-2020	YES	Electrical, electronics, and electromechanical assemblers.....	Summary	51-4120	YES	Welding, soldering, and brazing workers.....	Summary
51-2021	YES	Coil winders, tapers, and finishers.....	Line item	51-4121	YES	Welders, cutters, solderers, and brazers.....	Line item
51-2022	YES	Electrical and electronic equipment assemblers.....	Line item	51-4122	YES	Welding, soldering, and brazing machine setters, operators, and tenders.....	Line item
51-2023	YES	Electromechanical equipment assemblers.....	Line item	51-4190	YES	Miscellaneous metalworkers and plastic workers.....	Summary
51-2031	YES	Engine and other machine assemblers.....	Line item	51-4191	YES	Heat treating equipment setters, operators, and tenders, metal and plastic.....	Line item
51-2041	YES	Structural metal fabricators and fitters.....	Line item	51-4192	YES	Lay-out workers, metal and plastic.....	Line item
51-2090	YES	Miscellaneous assemblers and fabricators.....	Summary				
51-2091	YES	Fiberglass laminators and fabricators.....	Line item				
51-2092	YES	Team assemblers.....	Line item				
51-2093	YES	Timing device assemblers, adjusters, and calibrators.....	Line item				
51-2099	YES	All other assemblers and fabricators.....	Line item				
51-3000	YES	Food processing occupations.....	Summary				
51-3011	YES	Bakers.....	Line item				
51-3020	YES	Butchers and other meat, poultry, and fish processing workers.....	Summary				
51-3021	YES	Butchers and meat cutters.....	Line item				
51-3022	YES	Meat, poultry, and fish cutters and trimmers.....	Line item				
51-3023	YES	Slaughterers and meat packers.....	Line item				
51-3090	YES	Miscellaneous food processing workers.....	Summary				
51-3091	YES	Food and tobacco roasting, baking, and drying machine operators and tenders.....	Line item				
51-3092	YES	Food batchmakers.....	Line item				

Table II-1. National employment matrix occupational directory, 2002—Continued

Matrix code	Valid SOC code?	Matrix occupation title	Occupation type	Matrix code	Valid SOC code?	Matrix occupation title	Occupation type
51-4193	YES	Plating and coating machine setters, operators, and tenders, metal and plastic.....	Line item	51-8031	YES	Water and liquid waste treatment plant and system operators.....	Line item
51-4194	YES	Tool grinders, filers, and sharpeners.....	Line item	51-8090	YES	Miscellaneous plant and system operators.....	Summary
51-4199	YES	All other metal workers and plastic workers.....	Line item	51-8091	YES	Chemical plant and system operators.....	Line item
51-5000	YES	Printing occupations.....	Summary	51-8092	YES	Gas plant operators.....	Line item
51-5010	YES	Bookbinders and bindery workers.....	Summary	51-8093	YES	Petroleum pump system operators, refinery operators, and gaugers.....	Line item
51-5011	YES	Bindery workers.....	Line item	51-8099	YES	All other plant and system operators.....	Line item
51-5012	YES	Bookbinders.....	Line item	51-9000	YES	Other production occupations.....	Summary
51-5020	YES	Printers.....	Summary	51-9010	YES	Chemical processing machine setters, operators, and tenders.....	Summary
51-5021	YES	Job printers.....	Line item	51-9011	YES	Chemical equipment operators and tenders.....	Line item
51-5022	YES	Prepress technicians and workers.....	Line item	51-9012	YES	Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders.....	Line item
51-5023	YES	Printing machine operators.....	Line item	51-9020	YES	Crushing, grinding, polishing, mixing, and blending workers.....	Summary
51-5099	NO	All other printing workers.....	Line item	51-9021	YES	Crushing, grinding, and polishing machine setters, operators, and tenders.....	Line item
51-6000	YES	Textile, apparel, and furnishings occupations.....	Summary	51-9022	YES	Grinding and polishing workers, hand.....	Line item
51-6011	YES	Laundry and dry-cleaning workers.....	Line item	51-9023	YES	Mixing and blending machine setters, operators, and tenders.....	Line item
51-6021	YES	Pressers, textile, garment, and related materials.....	Line item	51-9030	YES	Cutting workers.....	Summary
51-6031	YES	Sewing machine operators.....	Line item	51-9031	YES	Cutters and trimmers, hand.....	Line item
51-6040	YES	Shoe and leather workers.....	Summary	51-9032	YES	Cutting and slicing machine setters, operators, and tenders.....	Line item
51-6041	YES	Shoe and leather workers and repairers.....	Line item	51-9041	YES	Extruding, forming, pressing, and compacting machine setters, operators, and tenders.....	Line item
51-6042	YES	Shoe machine operators and tenders.....	Line item	51-9051	YES	Furnace, kiln, oven, drier, and kettle operators and tenders.....	Line item
51-6050	YES	Tailors, dressmakers, and sewers.....	Summary	51-9061	YES	Inspectors, testers, sorters, samplers, and weighers.....	Line item
51-6051	YES	Sewers, hand.....	Line item	51-9071	YES	Jewelers and precious stone and metal workers.....	Line item
51-6052	YES	Tailors, dressmakers, and custom sewers.....	Line item	51-9080	YES	Medical, dental, and ophthalmic laboratory technicians.....	Summary
51-6060	YES	Textile machine setters, operators, and tenders.....	Summary	51-9081	YES	Dental laboratory technicians.....	Line item
51-6061	YES	Textile bleaching and dyeing machine operators and tenders.....	Line item	51-9082	YES	Medical appliance technicians.....	Line item
51-6062	YES	Textile cutting machine setters, operators, and tenders.....	Line item	51-9083	YES	Ophthalmic laboratory technicians.....	Line item
51-6063	YES	Textile knitting and weaving machine setters, operators, and tenders.....	Line item	51-9111	YES	Packaging and filling machine operators and tenders.....	Line item
51-6064	YES	Textile winding, twisting, and drawing out machine setters, operators, and tenders.....	Line item	51-9120	YES	Painting workers.....	Summary
51-6090	YES	Miscellaneous textile, apparel, and furnishings workers.....	Summary	51-9121	YES	Coating, painting, and spraying machine setters, operators, and tenders.....	Line item
51-6091	YES	Extruding and forming machine setters, operators, and tenders, synthetic and glass fibers.....	Line item	51-9122	YES	Painters, transportation equipment.....	Line item
51-6092	YES	Fabric and apparel patternmakers.....	Line item	51-9123	YES	Painting, coating, and decorating workers.....	Line item
51-6093	YES	Upholsterers.....	Line item	51-9130	YES	Photographic process workers and processing machine operators.....	Summary
51-6099	YES	All other textile, apparel, and furnishings workers.....	Line item	51-9131	YES	Photographic process workers.....	Line item
51-7000	YES	Woodworkers.....	Summary	51-9132	YES	Photographic processing machine operators.....	Line item
51-7011	YES	Cabinetmakers and bench carpenters.....	Line item	51-9141	YES	Semiconductor processors.....	Line item
51-7021	YES	Furniture finishers.....	Line item	51-9190	YES	Miscellaneous production workers.....	Summary
51-7030	YES	Model makers and patternmakers, wood.....	Summary	51-9191	YES	Cementing and gluing machine operators and tenders.....	Line item
51-7031	YES	Model makers, wood.....	Line item	51-9192	YES	Cleaning, washing, and metal pickling equipment operators and tenders.....	Line item
51-7032	YES	Patternmakers, wood.....	Line item	51-9193	YES	Cooling and freezing equipment operators and tenders.....	Line item
51-7040	YES	Woodworking machine setters, operators, and tenders.....	Summary	51-9194	YES	Etchers and engravers.....	Line item
51-7041	YES	Sawing machine setters, operators, and tenders, wood.....	Line item	51-9195	YES	Molders, shapers, and casters, except metal and plastic.....	Line item
51-7042	YES	Woodworking machine setters, operators, operators, and tenders, except sawing.....	Line item	51-9196	YES	Paper goods machine setters, operators, and tenders.....	Line item
51-7099	YES	All other woodworkers.....	Line item	51-9197	YES	Tire builders.....	Line item
51-8000	YES	Plant and system operators.....	Summary				
51-8010	YES	Power plant operators, distributors, and dispatchers.....	Summary				
51-8011	YES	Nuclear power reactor operators.....	Line item				
51-8012	YES	Power distributors and dispatchers.....	Line item				
51-8013	YES	Power plant operators.....	Line item				
51-8021	YES	Stationary engineers and boiler operators.....	Line item				

Table II-1. National employment matrix occupational directory, 2002—Continued

Matrix code	Valid SOC code?	Matrix occupation title	Occupation type	Matrix code	Valid SOC code?	Matrix occupation title	Occupation type
51-9198	YES	Helpers—production workers	Line item	53-4041	YES	Subway and streetcar operators.....	Collapse
51-9199	YES	All other production workers	Line item	53-4099	YES	Rail transportation workers, all other.....	Collapse
53-0000	YES	Transportation and material moving occupations.....	Summary	53-5000	YES	Water transportation occupations	Summary
53-1000	YES	Supervisors, transportation and material moving workers.....	Summary	53-5011	YES	Sailors and marine oilers.....	Line item
53-1011	YES	Aircraft cargo handling supervisors	Line item	53-5020	YES	Ship and boat captains and operators.....	Summary
53-1021	YES	First-line supervisors/managers of helpers, laborers, and material movers, hand	Line item	53-5021	YES	Captains, mates, and pilots of water vessels.....	Line item
53-1031	YES	First-line supervisors/managers of transportation and material-moving machine and vehicle operators.....	Line item	53-5022	YES	Motorboat operators	Line item
53-2000	YES	Air transportation occupations	Summary	53-5031	YES	Ship engineers	Line item
53-2010	YES	Aircraft pilots and flight engineers	Summary	53-5099	NO	All other water transportation workers.....	Line item
53-2011	YES	Airline pilots, copilots, and flight engineers	Line item	53-6000	YES	Other transportation workers.....	Summary
53-2012	YES	Commercial pilots.....	Line item	53-6011	YES	Bridge and lock tenders.....	Line item
53-2020	YES	Air traffic controllers and airfield operations specialists	Summary	53-6021	YES	Parking lot attendants.....	Line item
53-2021	YES	Air traffic controllers.....	Line item	53-6031	YES	Service station attendants	Line item
53-2022	YES	Airfield operations specialists	Line item	53-6041	YES	Traffic technicians	Line item
53-2099	NO	All other air transportation workers	Line item	53-6051	YES	Transportation inspectors.....	Line item
53-3000	YES	Motor vehicle operators.....	Summary	53-6099	YES	All other related transportation workers.....	Line item
53-3011	YES	Ambulance drivers and attendants, except emergency medical technicians.....	Line item	53-7000	YES	Material moving occupations.....	Summary
53-3020	YES	Bus drivers	Summary	53-7011	YES	Conveyor operators and tenders.....	Line item
53-3021	YES	Bus drivers, transit and intercity	Line item	53-7021	YES	Crane and tower operators.....	Line item
53-3022	YES	Bus drivers, school.....	Line item	53-7030	YES	Dredge, excavating, and loading machine operators	Summary
53-3030	YES	Driver/sales workers and truck drivers	Summary	53-7031	YES	Dredge operators	Line item
53-3031	YES	Driver/sales workers.....	Line item	53-7032	YES	Excavating and loading machine and dragline operators	Line item
53-3032	YES	Truck drivers, heavy and tractor-trailer.....	Line item	53-7033	YES	Loading machine operators, underground mining.....	Line item
53-3033	YES	Truck drivers, light or delivery services	Line item	53-7041	YES	Hoist and winch operators.....	Line item
53-3041	YES	Taxi drivers and chauffeurs	Line item	53-7051	YES	Industrial truck and tractor operators.....	Line item
53-3099	YES	All other motor vehicle operators.....	Line item	53-7060	YES	Laborers and material movers, hand.....	Summary
53-4000	YES	Rail transportation occupations	Summary	53-7061	YES	Cleaners of vehicles and equipment	Line item
53-4010	YES	Locomotive engineers and operators	Rollup	53-7062	YES	Laborers and freight, stock, and material movers, hand	Line item
53-4011	YES	Locomotive engineers	Collapse	53-7063	YES	Machine feeders and offbearers.....	Line item
53-4012	YES	Locomotive firers	Collapse	53-7064	YES	Packers and packagers, hand.....	Line item
53-4013	YES	Rail yard engineers, dinkey operators, and hostlers	Collapse	53-7070	YES	Pumping station operators	Summary
53-4021	YES	Railroad brake, signal, and switch operators.....	Line item	53-7071	YES	Gas compressor and gas pumping station operators	Line item
53-4031	YES	Railroad conductors and yardmasters.....	Line item	53-7072	YES	Pump operators, except wellhead pumpers.....	Line item
53-4039	NO	Subway, streetcar operators, and all other rail transportation workers	Rollup	53-7073	YES	Wellhead pumpers	Line item
				53-7081	YES	Refuse and recyclable material collectors.....	Line item
				53-7111	YES	Shuttle car operators	Line item
				53-7121	YES	Tank car, truck, and ship loaders.....	Line item
				53-7199	YES	Material moving workers, all other.....	Line item

Table II-2. National employment matrix industry directory, 2002

Matrix code	Valid NAICS code?	Matrix industry title	Industry type	Matrix code	Valid NAICS code?	Matrix industry title	Industry type
000001	NO	Total employment, all jobs	Summary	311700	YES	Seafood product preparation and packaging	Detail
006700	NO	Total self-employed and unpaid family workers, all jobs	Summary	311800	YES	Bakeries and tortilla manufacturing.....	Detail
006701	NO	Total self-employed and unpaid family workers, primary job.....	Summary	311900	YES	Other food manufacturing.....	Detail
006702	NO	Total self-employed and unpaid family workers, secondary job	Summary	312000	YES	Beverage and tobacco product manufacturing	Summary
000600	NO	Self-employed workers, all jobs	Summary	312100	YES	Beverage manufacturing	Detail
000601	NO	Self-employed workers, primary job	Detail	312200	YES	Tobacco manufacturing.....	Detail
000602	NO	Self-employed workers, secondary job	Detail	313000	YES	Textile mills.....	Summary
000700	NO	Unpaid family workers, all jobs.....	Summary	313100	YES	Fiber, yarn, and thread mills.....	Detail
000701	NO	Unpaid family workers, primary job.....	Detail	313200	YES	Fabric mills	Detail
000702	NO	Unpaid family workers, secondary job.....	Detail	313300	YES	Textile and fabric finishing and fabric coating mills	Detail
000510	NO	Wage and salary workers, second job in agricultural production, forestry, fishing, and private households	Detail	314000	YES	Textile product mills.....	Summary
000520	NO	Wage and salary workers, all industries except second job in agricultural production, forestry, fishing, and private households.....	Summary	314100	YES	Textile furnishings mills	Detail
110000	YES	Agriculture, forestry, fishing and hunting ¹	Summary	314900	YES	Other textile product mills.....	Detail
111000	YES	Crop production ¹	Detail	315000	YES	Apparel manufacturing	Summary
112000	YES	Animal production ¹	Detail	315100	YES	Apparel knitting mills	Detail
113000	YES	Forestry and logging.....	Summary	315200	YES	Cut and sew apparel manufacturing.....	Detail
113132	NO	Forestry ¹	Detail	315900	YES	Apparel accessories and other apparel manufacturing	Detail
113300	YES	Logging	Detail	316000	YES	Leather and allied product manufacturing	Summary
114000	YES	Fishing, hunting, and trapping ¹	Detail	316200	YES	Footwear manufacturing.....	Detail
115000	YES	Support activities for agriculture and forestry ¹	Detail	321000	YES	Wood product manufacturing	Summary
210000	YES	Mining	Summary	321100	YES	Sawmills and wood preservation.....	Detail
211000	YES	Oil and gas extraction.....	Summary	321200	YES	Veneer, plywood, and engineered wood product manufacturing	Detail
211100	YES	Oil and gas extraction.....	Detail	321900	YES	Other wood product manufacturing	Detail
212000	YES	Mining (except oil and gas).....	Summary	322000	YES	Paper manufacturing.....	Summary
212100	YES	Coal mining	Detail	322100	YES	Pulp, paper, and paperboard mills	Detail
212200	YES	Metal ore mining	Detail	322200	YES	Converted paper product manufacturing	Detail
212300	YES	Nonmetallic mineral mining and quarrying	Detail	323000	YES	Printing and related support activities	Summary
213000	YES	Support activities for mining	Summary	323100	YES	Printing and related support activities	Detail
213100	YES	Support activities for mining	Detail	324000	YES	Petroleum and coal products manufacturing	Summary
230000	YES	Construction	Summary	324100	YES	Petroleum and coal products manufacturing	Detail
236000	YES	Construction of buildings	Summary	325000	YES	Chemical manufacturing	Summary
236100	YES	Residential building construction	Detail	325100	YES	Basic chemical manufacturing	Detail
236200	YES	Nonresidential building construction.....	Detail	325200	YES	Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing.....	Detail
237000	YES	Heavy and civil engineering construction	Summary	325300	YES	Pesticide, fertilizer, and other agricultural chemical manufacturing	Detail
237100	YES	Utility system construction	Detail	325400	YES	Pharmaceutical and medicine manufacturing	Detail
237200	YES	Land subdivision.....	Detail	325500	YES	Paint, coating, and adhesive manufacturing	Detail
237300	YES	Highway, street, and bridge construction	Detail	325600	YES	Soap, cleaning compound, and toilet preparation manufacturing.....	Detail
237900	YES	Other heavy and civil engineering construction.....	Detail	325900	YES	Other chemical product and preparation manufacturing	Detail
238000	YES	Specialty trade contractors.....	Summary	326000	YES	Plastics and rubber products manufacturing	Summary
238100	YES	Foundation, structure, and building exterior contractors	Detail	326100	YES	Plastics product manufacturing	Detail
238200	YES	Building equipment contractors.....	Detail	326200	YES	Rubber product manufacturing.....	Detail
238300	YES	Building finishing contractors.....	Detail	327000	YES	Nonmetallic mineral product manufacturing	Summary
238900	YES	Other specialty trade contractors.....	Detail	327100	YES	Clay product and refractory manufacturing	Detail
31-330	NO	Manufacturing.....	Summary	327200	YES	Glass and glass product manufacturing.....	Detail
311000	YES	Food manufacturing	Summary	327300	YES	Cement and concrete product manufacturing	Detail
311100	YES	Animal food manufacturing.....	Detail	331000	YES	Primary metal manufacturing	Summary
311200	YES	Grain and oilseed milling.....	Detail				
311300	YES	Sugar and confectionery product manufacturing	Detail				
311400	YES	Fruit and vegetable preserving and specialty food manufacturing	Detail				
311500	YES	Dairy product manufacturing	Detail				
311600	YES	Animal slaughtering and processing	Detail				

Table II-2. National employment matrix industry directory, 2002—Continued

Matrix code	Valid NAICS code?	Matrix industry title	Industry type	Matrix code	Valid NAICS code?	Matrix industry title	Industry type
331100	YES	Iron and steel mills and ferroalloy manufacturing	Detail	336400	YES	Aerospace product and parts manufacturing	Detail
331200	YES	Steel product manufacturing from purchased steel.....	Detail	336500	YES	Railroad rolling stock manufacturing	Detail
331300	YES	Alumina and aluminum production and processing.....	Detail	336600	YES	Ship and boat building.....	Detail
331400	YES	Nonferrous metal (except aluminum) production and processing.....	Detail	336900	YES	Other transportation equipment manufacturing	Detail
331500	YES	Foundries.....	Detail	337000	YES	Furniture and related product manufacturing	Summary
332000	YES	Fabricated metal product manufacturing.....	Summary	337100	YES	Household and institutional furniture and kitchen cabinet manufacturing	Detail
332100	YES	Forging and stamping.....	Detail	337200	YES	Office furniture (including fixtures) manufacturing	Detail
332200	YES	Cutlery and handtool manufacturing.....	Detail	337900	YES	Other furniture related product manufacturing	Detail
332300	YES	Architectural and structural metals manufacturing	Detail	339000	YES	Miscellaneous manufacturing.....	Summary
332400	YES	Boiler, tank, and shipping container manufacturing	Detail	339100	YES	Medical equipment and supplies manufacturing	Detail
332500	YES	Hardware manufacturing	Detail	339900	YES	Other miscellaneous manufacturing.....	Detail
332600	YES	Spring and wire product manufacturing.....	Detail	420000	YES	Wholesale trade	Summary
332700	YES	Machine shops; turned product; and screw, nut, and bolt manufacturing	Detail	423000	YES	Merchant wholesalers, durable goods.....	Summary
332800	YES	Coating, engraving, heat treating, and allied activities.....	Detail	423100	YES	Motor vehicle and motor vehicle parts and supplies merchant wholesalers.....	Detail
332900	YES	Other fabricated metal product manufacturing	Detail	423200	YES	Furniture and home furnishing merchant wholesalers	Detail
333000	YES	Machinery manufacturing	Summary	423300	YES	Lumber and other construction materials merchant wholesalers	Detail
333100	YES	Agriculture, construction, and mining machinery manufacturing.....	Detail	423400	YES	Professional and commercial equipment and supplies merchant wholesalers	Detail
333200	YES	Industrial machinery manufacturing.....	Detail	423500	YES	Metal and mineral (except petroleum) merchant wholesalers	Detail
333300	YES	Commercial and service industry machinery manufacturing.....	Detail	423600	YES	Electrical and electronic goods merchant wholesalers	Detail
333400	YES	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing	Detail	423700	YES	Hardware, and plumbing and heating equipment and supplies merchant wholesalers	Detail
333500	YES	Metalworking machinery manufacturing.....	Detail	423800	YES	Machinery, equipment, and supplies merchant wholesalers	Detail
333600	YES	Engine, turbine, and power transmission equipment manufacturing	Detail	423900	YES	Miscellaneous durable goods merchant wholesalers	Detail
333900	YES	Other general purpose machinery manufacturing	Detail	424000	YES	Merchant wholesalers, nondurable goods	Summary
334000	YES	Computer and electronic product manufacturing	Summary	424100	YES	Paper and paper product merchant wholesalers	Detail
334100	YES	Computer and peripheral equipment manufacturing	Detail	424200	YES	Drugs and druggists' sundries merchant wholesalers	Detail
334200	YES	Communications equipment manufacturing	Detail	424300	YES	Apparel, piece goods, and notions merchant wholesalers	Detail
334300	YES	Audio and video equipment manufacturing	Detail	424400	YES	Grocery and related product wholesalers....	Detail
334400	YES	Semiconductor and other electronic component manufacturing	Detail	424500	YES	Farm product raw material merchant wholesalers	Detail
334500	YES	Navigational, measuring, electromedical, and control instruments manufacturing	Detail	424600	YES	Chemical and allied products merchant wholesalers	Detail
334600	YES	Manufacturing and reproducing magnetic and optical media	Detail	424700	YES	Petroleum and petroleum products merchant wholesalers	Detail
335000	YES	Electrical equipment, appliance, and component manufacturing	Summary	424800	YES	Beer, wine, and distilled alcoholic beverage merchant wholesalers	Detail
335100	YES	Electric lighting equipment manufacturing	Detail	424900	YES	Miscellaneous nondurable goods merchant wholesalers	Detail
335200	YES	Household appliance manufacturing	Detail	425000	YES	Wholesale electronic markets and agents and brokers.....	Summary
335300	YES	Electrical equipment manufacturing	Detail	425100	YES	Wholesale electronic markets and agents and brokers.....	Detail
335900	YES	Other electrical equipment and component manufacturing	Detail	44-450	NO	Retail trade	Summary
336000	YES	Transportation equipment manufacturing	Summary	441000	YES	Motor vehicle and parts dealers	Summary
336100	YES	Motor vehicle manufacturing	Detail	441100	YES	Automobile dealers.....	Detail
336200	YES	Motor vehicle body and trailer manufacturing	Detail	441200	YES	Other motor vehicle dealers	Detail
336300	YES	Motor vehicle parts manufacturing	Detail				

Table II-2. National employment matrix industry directory, 2002—Continued

Matrix code	Valid NAICS code?	Matrix industry title	Industry type	Matrix code	Valid NAICS code?	Matrix industry title	Industry type
441300	YES	Automotive parts, accessories, and tire stores	Detail	488000	YES	Support activities for transportation	Summary
442000	YES	Furniture and home furnishings stores	Summary	488100	YES	Support activities for air transportation	Detail
442100	YES	Furniture stores	Detail	488300	YES	Support activities for water transportation	Detail
442200	YES	Home furnishings stores	Detail	488400	YES	Support activities for road transportation	Detail
443000	YES	Electronics and appliance stores	Summary	488500	YES	Freight transportation arrangement	Detail
443100	YES	Electronics and appliance stores	Detail	492000	YES	Couriers and messengers	Summary
444000	YES	Building material and garden equipment and supplies dealers	Summary	492100	YES	Couriers	Detail
444100	YES	Building material and supplies dealers	Detail	492200	YES	Local messengers and local delivery	Detail
444200	YES	Lawn and garden equipment and supplies stores	Detail	493000	YES	Warehousing and storage	Summary
445000	YES	Food and beverage stores	Summary	493100	YES	Warehousing and storage	Detail
445100	YES	Grocery stores	Detail	220000	YES	Utilities	Summary
445200	YES	Specialty food stores	Detail	221000	YES	Utilities	Summary
445300	YES	Beer, wine, and liquor stores	Detail	221100	YES	Electric power generation, transmission, and distribution	Detail
446000	YES	Health and personal care stores	Summary	221200	YES	Natural gas distribution	Detail
446100	YES	Health and personal care stores	Detail	221300	YES	Water, sewage, and other systems	Detail
447000	YES	Gasoline stations	Summary	510000	YES	Information	Summary
447100	YES	Gasoline stations	Detail	511000	YES	Publishing industries (except Internet)	Summary
448000	YES	Clothing and clothing accessories stores	Summary	511100	YES	Newspaper, periodical, book, and directory publishers	Detail
448100	YES	Clothing stores	Detail	511200	YES	Software publishers	Detail
448200	YES	Shoe stores	Detail	512000	YES	Motion picture and sound recording industries	Summary
448300	YES	Jewelry, luggage, and leather goods stores	Detail	512100	YES	Motion picture and video industries	Detail
451000	YES	Sporting goods, hobby, book, and music stores	Summary	512200	YES	Sound recording industries	Detail
451100	YES	Sporting goods, hobby, and musical instrument stores	Detail	515000	YES	Broadcasting (except Internet)	Summary
451200	YES	Book, periodical, and music stores	Detail	515100	YES	Radio and television broadcasting	Detail
452000	YES	General merchandise stores	Summary	515200	YES	Cable and other subscription programming	Detail
452100	YES	Department stores	Detail	516000	YES	Internet publishing and broadcasting	Summary
452900	YES	Other general merchandise stores	Detail	516100	YES	Internet publishing and broadcasting	Detail
453000	YES	Miscellaneous store retailers	Summary	517000	YES	Telecommunications	Summary
453100	YES	Florists	Detail	517100	YES	Wired telecommunications carriers	Detail
453200	YES	Office supplies, stationery, and gift stores	Detail	517200	YES	Wireless telecommunications carriers (except satellite)	Detail
453300	YES	Used merchandise stores	Detail	517300	YES	Telecommunications resellers	Detail
453900	YES	Other miscellaneous store retailers	Detail	517500	YES	Cable and other program distribution	Detail
454000	YES	Nonstore retailers	Summary	518000	YES	Internet service providers, web search portals, and data processing services ..	Summary
454100	YES	Electronic shopping and mail-order houses	Detail	518100	YES	Internet service providers and web search portals	Detail
454200	YES	Vending machine operators	Detail	518200	YES	Data processing, hosting, and related services	Detail
454300	YES	Direct selling establishments	Detail	519000	YES	Other information services	Summary
48-490	NO	Transportation and warehousing	Summary	519100	YES	Other information services	Detail
481000	YES	Air transportation	Summary	520000	YES	Finance and insurance	Summary
481100	YES	Scheduled air transportation	Detail	521000	YES	Monetary authorities—central bank	Summary
481200	YES	Nonscheduled air transportation	Detail	521100	YES	Monetary authorities—central bank	Detail
482000	YES	Rail transportation	Summary	522000	YES	Credit intermediation and related activities	Summary
482100	YES	Rail transportation	Detail	522100	YES	Depository credit intermediation	Detail
483000	YES	Water transportation	Summary	522200	YES	Nondepository credit intermediation	Detail
483100	YES	Deep sea, coastal, and great lakes water transportation	Detail	522300	YES	Activities related to credit intermediation	Detail
483200	YES	Inland water transportation	Detail	523000	YES	Securities, commodity contracts, and other financial investments and related activities	Summary
484000	YES	Truck transportation	Summary	523900	YES	Other financial investment activities	Detail
484100	YES	General freight trucking	Detail	524000	YES	Insurance carriers and related activities	Summary
484200	YES	Specialized freight trucking	Detail	524100	YES	Insurance carriers	Detail
485000	YES	Transit and ground passenger transportation	Summary	524200	YES	Agencies, brokerages, and other insurance related activities	Detail
485100	YES	Urban transit systems	Detail	525000	YES	Funds, trusts, and other financial vehicles	Summary
485200	YES	Interurban and rural bus transportation	Detail	525100	YES	Insurance and employee benefit funds	Detail
485300	YES	Taxi and limousine service	Detail				
485400	YES	School and employee bus transportation	Detail				
485500	YES	Charter bus industry	Detail				
485900	YES	Other transit and ground passenger transportation	Detail				
486000	YES	Pipeline transportation	Detail				
487000	YES	Scenic and sightseeing transportation	Detail				

Table II-2. National employment matrix industry directory, 2002—Continued

Matrix code	Valid NAICS code?	Matrix industry title	Industry type	Matrix code	Valid NAICS code?	Matrix industry title	Industry type
525900	YES	Other investment pools and funds.....	Detail	621200	YES	Offices of dentists.....	Detail
530000	YES	Real estate and rental and leasing.....	Summary	621300	YES	Offices of other health practitioners.....	Detail
531000	YES	Real estate	Summary	621400	YES	Outpatient care centers.....	Detail
531100	YES	Lessors of real estate.....	Detail	621500	YES	Medical and diagnostic laboratories.....	Detail
531200	YES	Offices of real estate agents and brokers.....	Detail	621600	YES	Home health care services.....	Detail
531300	YES	Activities related to real estate.....	Detail	621900	YES	Other ambulatory health care services.....	Detail
532000	YES	Rental and leasing services.....	Summary	622000	YES	Hospitals, private.....	Detail
532100	YES	Automotive equipment rental and leasing.....	Detail	623000	YES	Nursing and residential care facilities.....	Summary
532200	YES	Consumer goods rental.....	Detail	623100	YES	Nursing care facilities.....	Detail
532300	YES	General rental centers.....	Detail	623200	YES	Residential mental retardation, mental health and substance abuse facilities...	Detail
532400	YES	Commercial and industrial machinery and equipment rental and leasing.....	Detail	623300	YES	Community care facilities for the elderly.....	Detail
533000	YES	Lessors of nonfinancial intangible assets (except copyrighted works).....	Summary	623900	YES	Other residential care facilities.....	Detail
533100	YES	Lessors of nonfinancial intangible assets (except copyrighted works).....	Detail	624000	YES	Social assistance.....	Summary
540000	YES	Professional, scientific, and technical services.....	Summary	624100	YES	Individual and family services.....	Detail
541000	YES	Professional, scientific, and technical services.....	Summary	624200	YES	Community food and housing, and emergency and other relief services.....	Detail
541100	YES	Legal services.....	Detail	624300	YES	Vocational rehabilitation services.....	Detail
541200	YES	Accounting, tax preparation, bookkeeping, and payroll services.....	Detail	624400	YES	Child day care services.....	Detail
541300	YES	Architectural, engineering, and related services.....	Detail	710000	YES	Arts, entertainment, and recreation.....	Summary
541400	YES	Specialized design services.....	Detail	711000	YES	Performing arts, spectator sports, and related industries.....	Summary
541500	YES	Computer systems design and related services.....	Detail	711100	YES	Performing arts companies.....	Detail
541600	YES	Management, scientific, and technical consulting services.....	Detail	711200	YES	Spectator sports.....	Detail
541700	YES	Scientific research and development services.....	Detail	711500	YES	Independent artists, writers, and performers.....	Detail
541800	YES	Advertising and related services.....	Detail	712000	YES	Museums, historical sites, and similar institutions.....	Summary
541900	YES	Other professional, scientific, and technical services.....	Detail	712100	YES	Museums, historical sites, and similar institutions.....	Detail
550000	YES	Management of companies and enterprises.....	Summary	713000	YES	Amusement, gambling, and recreation industries.....	Summary
551000	YES	Management of companies and enterprises.....	Summary	713100	YES	Amusement parks and arcades.....	Detail
551100	YES	Management of companies and enterprises.....	Detail	713200	YES	Gambling industries.....	Detail
560000	YES	Administrative and support and waste management and remediation services.....	Summary	713900	YES	Other amusement and recreation industries.....	Detail
561000	YES	Administrative and support services.....	Summary	720000	YES	Accommodation and food services.....	Summary
561100	YES	Office administrative services.....	Detail	721000	YES	Accommodation.....	Summary
561200	YES	Facilities support services.....	Detail	721200	YES	RV (recreational vehicle) parks and recreational camps.....	Detail
561300	YES	Employment services.....	Detail	722000	YES	Food services and drinking places.....	Summary
561400	YES	Business support services.....	Detail	722100	YES	Full-service restaurants.....	Detail
561500	YES	Travel arrangement and reservation services.....	Detail	722200	YES	Limited-service eating places.....	Detail
561600	YES	Investigation and security services.....	Detail	722300	YES	Special food services.....	Detail
561700	YES	Services to buildings and dwellings.....	Detail	722400	YES	Drinking places (alcoholic beverages).....	Detail
561900	YES	Other support services.....	Detail	810000	YES	Other services (except government).....	Summary
562000	YES	Waste management and remediation services.....	Summary	811000	YES	Repair and maintenance.....	Summary
562100	YES	Waste collection.....	Detail	811100	YES	Automotive repair and maintenance.....	Detail
562200	YES	Waste treatment and disposal.....	Detail	811200	YES	Electronic and precision equipment repair and maintenance.....	Detail
562900	YES	Remediation and other waste management services.....	Detail	811300	YES	Commercial and industrial machinery and equipment (except automotive and electronic) repair and maintenance.....	Detail
610000	YES	Educational services, private.....	Summary	811400	YES	Personal and household goods repair and maintenance.....	Detail
611000	YES	Educational services, private.....	Detail	812000	YES	Personal and laundry services.....	Summary
620000	YES	Health care and social assistance.....	Summary	812100	YES	Personal care services.....	Detail
621000	YES	Ambulatory health care services.....	Summary	812200	YES	Death care services.....	Detail
621100	YES	Offices of physicians.....	Detail	812300	YES	Drycleaning and laundry services.....	Detail
				812900	YES	Other personal services.....	Detail
				813000	YES	Religious, grantmaking, civic, professional, and similar organizations.....	Summary
				813100	YES	Religious organizations.....	Detail
				813200	YES	Grantmaking and giving services.....	Detail
				813300	YES	Social advocacy organizations.....	Detail
				813400	YES	Civic and social organizations.....	Detail
				813900	YES	Business, professional, labor, political, and similar organizations.....	Detail

Table II-2. National employment matrix industry directory, 2002—Continued

Matrix code	Valid NAICS code?	Matrix industry title	Industry type	Matrix code	Valid NAICS code?	Matrix industry title	Industry type
814000	YES	Private households ¹	Summary	926110	NO	State government educational services	Detail
814100	YES	Private households ¹	Detail	926220	NO	State government hospitals.....	Detail
990000	NO	Government	Summary	929200	NO	State government, excluding education and hospitals.....	Detail
910000	NO	Federal Government	Summary	930000	NO	Local government.....	Summary
491100	YES	Postal Service	Detail	936110	NO	Local government educational services.....	Detail
919999	NO	Federal Government, excluding Postal Service.....	Detail	936220	NO	Local government hospitals	Detail
920000	NO	State government.....	Summary	939300	NO	Local government, excluding education and hospitals.....	Detail

¹ Except secondary jobs in agricultural production, forestry, fishing, or private households.